



Remedial Investigation Report
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, North Carolina
Task Order 2900 RI-8
S&ME Project No. 23050459

PREPARED FOR:

**North Carolina Department of Environmental Quality
Division of Waste Management – Special Remediation Branch
Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, NC 27699-1646**

PREPARED BY:

**S&ME, Inc.
3201 Spring Forest Road
Raleigh, NC 27616**

March 6, 2025



March 6, 2025

North Carolina Department of Environmental Quality
Division of Waste Management – Special Remediation Branch
Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, NC 27699-1646

Attention: Ms. Analee Thornburg via email: analee.thornburg@deq.nc.gov
Project Manager

Reference: **Remedial Investigation Report – Soil Gas and Groundwater
Cumberland County/Cliffdale Landfill**
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
NCDEQ ID No. NCD98052900
NCDEQ Task Order 2900RI-8
S&ME Project No. 23050459

Dear Ms. Thornburg:

S&ME, Inc. (S&ME) is submitting this report to NCDEQ summarizing the results of the soil gas and groundwater evaluation phase remedial investigation activities conducted at the above-referenced site in Fayetteville, North Carolina. S&ME completed this investigation in general conformance with S&ME Proposal No. 23050459C, Revision 1, dated July 9, 2024, between NCDEQ and S&ME. The attached report includes the results of the following tasks:

- Soil Gas Probe and Implant Installation, and Groundwater Monitoring Well Installation
- Soil Gas Sampling, and Groundwater Sampling

We appreciate the opportunity to provide environmental consulting services to NCDEQ. Please contact us if you have any questions about the information included in this report.

Sincerely,

S&ME, Inc.

Handwritten signature of Connor Hicks in blue ink.

Connor Hicks, G.I.T.
Environmental Geologist II
connorhicks@smeinc.com

Handwritten signature of Thomas Raymond in blue ink.

Thomas Raymond, P. E., PMP
Principal Engineer/Project Manager
traymond@smeinc.com

Attachment: *Remedial Investigation Report*

Copy: Gerald Paul, S&ME, Inc.



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1.0 Summary of Current Investigation

S&ME completed the scope of services listed below for this investigation in general conformance with S&ME Proposal No. 23050459C, Revision 1, dated July 9, 2024, for Task Order 2900RI-8:

- Installed, field-screened, and sampled 21 landfill gas probes and five soil gas implants for laboratory analysis;
- Installed, field-screened, and sampled nine groundwater monitor wells for laboratory analysis; and
- Prepared this report.

S&ME's services were performed in general accordance with the North Carolina Department of Environmental Quality (NCDEQ), *Guidelines for Addressing Pre-Regulatory Landfills and Dumps* (March 2022) and S&ME's approved *Standard Operating Procedures and Quality Assurance (SOP/QA) Manual (July 2010)*, previously approved by NCDEQ.

2.0 Landfill Gas Assessment

2.1 Soil Gas Probe and Implant Installation

On September 10, 2024 through September 18, 2024, 21 Soil Gas Probes (SGP) and 5 Soil Gas Implants (SGI) were installed using a track mounted Geoprobe® unit (7822 DT) outfitted with six-inch diameter rods. S&ME personnel screened the soil for VOCs during installation of the soil gas probes and implants. No visual indications of contamination or elevated organic vapors were noted during installation.

SGP's were installed to depths of 7 to 11 ft-bgs, and SGI's were installed to a depth of 3-5 ft-bgs. Once the total depth of the SGP's was determined, a 1-inch diameter 1 to 5-foot-long section of PVC 0.010-inch slotted screen was installed with PVC well riser casing installed from the top of the well screen up to the ground surface. A sand pack of #2 filter sand was placed in the annulus between the borehole wall and the well screen up to approximately two feet above the top of the well screen. A bentonite seal was then installed up to approximately two feet above the top of the sand pack for all SGP's. For the SGI's, an implant was placed at the bottom of the boring and a sand pack of #2 filter sand one foot above the implant. Granular bentonite was then used to seal the boring from the sand pack to the ground surface. The SGP and SGI construction details are presented in **Table 1** and the location of the SGP's and SGI's are shown in **Figure 1**. The Coordinates of Selected Features are included in **Appendix I** and the Well Construction Records are included in **Appendix II**.

2.2 Field Screening Methods

The 21 soil gas probes and 5 soil gas implants were screened for landfill gas on September 26, 2024. **Figure 2** shows the data from the September 26, 2024, field screening event. Portable meters were used to collect the following parameters at each soil gas probe, soil gas implant and background screening location:



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- Landfill Gas Meter – GEM5000 PLUS for the following:
 - methane: 0-100%, +/- 0.3% to 1.5% accuracy
 - hydrogen sulfide: 0-500 parts per million-volume (ppm-v), with +/- 2.0% accuracy
 - carbon dioxide: 0-100%, +/- 0.5% to 1.5% accuracy
 - oxygen: 0-25%, +/- 1.0% accuracy
 - barometric pressure: +/- 14.7 inches mercury from calibration pressure, +/- 1% inches mercury accuracy
- Photo-Ionization Detector (PID) MiniRAE 3000 for total VOCs: 0-15,000 ppm-v, with +/- 0.1 ppm-v resolution over range of 0 to 999.9 ppm-v and +/- 1 ppm-v resolution over range of 1,000 to 15,000 ppm-v.

Each of the meters listed above has an internal pump, which was used to draw air samples from the gas probe through the portable meters. New Teflon tubing was connected from the meters to the soil gas probe cap for sampling.

A thermohygrometer was used to measure ambient air for humidity and temperature. The landfill gas screening forms which summarize the results are included with the field documents in **Appendix III**.

2.3 Landfill Gas Screening Results

2.3.1 Volatile Organic Compounds

VOCs were detected in 22 out of 26 sample locations. VOCs were not detected in SGP-20, SGI-26, SGP-27, and SGP-28. During the screening event, concentrations ranged from 0.2 parts per million by volume (ppm-v) to 4.3 ppm-v.

2.3.2 Methane

During the screening event, methane was detected in 24 of 26 sample locations. Methane was not detected in SGP-27 and SGP-28. Concentrations ranged from 10.2% to 68.4% (volume in air), all exceeding the Lower Explosive Limit (LEL) for methane (5%). The GEM5000 manufacturer specifies an approximate accuracy range of +/- 0.3% of the displayed reading for methane concentrations between 0% and 5%.

2.3.3 Hydrogen Sulfide

Hydrogen Sulfide was detected in 20 of 26 sample locations. Hydrogen Sulfide was not detected in SGP-4, SGP-5, SGP-9, SGP-24, SGP-27, and SGP-28. Concentrations ranged from 2 ppm-v to 98 ppm-v in sample locations where Hydrogen Sulfide was detected. The GEM5000 manufacturer specifies an approximate accuracy range of +/- 2.0% of the displayed reading for hydrogen sulfide concentrations between 0 – 500 ppm-v. The landfill gas screening results are summarized in **Table 3**.

2.4 Landfill Gas Sampling

On September 24, 2024, through September 30, 2024, S&ME personnel used batch-certified sampling canisters to collect samples (including duplicate samples) from 21 soil gas probes and 5 soil gas implants



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for laboratory analysis of VOCs by EPA Method TO-15, Methane by Method 1946, and Hydrogen sulfide by ASTM D5504.

2.4.1 *Shut-in Testing*

Prior to beginning sample collection, S&ME performed a shut-in test and helium leak test in general accordance with the Pre-Regulatory Landfill Guidance document. The shut-in test was performed by attaching the dedicated sampling array (series of dedicated stopcock valves, Teflon® tubing and silicone tubing) to the soil gas probe on one end and to the regulator installed on a batch certified six-liter summa canister on the other end. An open end of the sample array (three-way stopcock) was connected to a 100 ml/cc dedicated syringe. The syringe was then used to pull vacuum on the sample train (approximately 10" of Hg – indicated on the regulator vacuum gage). Once the vacuum was created the three-way stopcock was closed to seal the sample train. After approximately one minute of the vacuum being held on the sample train, the vacuum was released, and the shut-in test was considered successful.

2.4.2 *Helium Leak Testing*

To perform the helium leak test, the syringe was replaced by additional Teflon® tubing and was connected to the purge port on the leak testing shroud. Next, a section of Teflon® tubing was then attached to the end of the stopcock valve and fitted through a plastic shroud that was placed overtop the soil gas probe sampling array. S&ME then injected helium gas into the plastic shroud until the concentration reached at least 15% helium, as monitored with a helium detector. The gas probe and sampling array were monitored for leaks by using a calibrated personal pump to purge air from the sampling array into a Tedlar® bag.

The purged air from the sampling array in the Tedlar® bag was then monitored for the presence of helium gas concentration with a helium detector. Per the North Carolina Department of Environmental Quality (NCDEQ) Vapor Intrusion Guidance Document (March 2018), the helium concentrations detected during the leak test shall not exceed 10% of the helium concentration contained in the shroud. Each of the gas probes or soil gas implants and sampling arrays had a successful leak test.

2.4.3 *Purging and Sampling*

After successfully passing the leak test, a minimum of three volumes of air were purged from the gas probes and sampling arrays. After purging the sampling array, the ball valve attachment on the T-connector leading to the purge point was closed and the valve on the regulator was opened to allow the collection of the samples into summa canisters.

Following the collection of soil gas samples using the summa canisters, samples were collected for hydrogen sulfide analysis by EPA Method D5504. Samples were collected by attaching a section of Teflon® tubing to a Tedlar® bag that was filled by utilizing a personal pump to purge air from the sampling array into the Tedlar® bag.

After collecting the gas samples, the summa canisters were shipped under standard chain-of-custody protocol to Eurofins Environmental Testing (Eurofins) for VOC analysis by EPA Method TO-15 and for methane by EPA Method D1946. The Tedlar bags were shipped under standard chain-of-custody protocol



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to the Air Technology Laboratory for hydrogen sulfide analysis by ASTM Method D5504. The field sampling forms are included in **Appendix III**.

2.5 Landfill Gas Sample Results

The laboratory reported detections of multiple volatile organic compounds in the soil gas samples. The NCDEQ Risk Calculator was used to assess the risk for the soil gas to indoor air pathway. The Residential Receptor Risk was exceeded at 25 of 26 sample locations. The Non-Residential Worker Receptor Risk was exceeded at 22 of 26 sample locations. See **Section 4.0** for the Risk Calculator details.

Methane was detected above the LEL in 24 of 26 sample locations.

Hydrogen Sulfide was detected in 25 of 26 sample locations.

A summary of the laboratory results is included in **Table 5** and the results of the NCDEQ Risk Calculator Residential and Non-Residential Vapor Intrusion risk levels are shown on **Figure 4**. The field notes are included in **Appendix III**. The laboratory reports and chain of custody forms are included in **Appendix IV**.

3.0 Groundwater Assessment

3.1 Monitor Well Installations

On September 10, 2024, through September 19, 2024, nine groundwater monitor wells (MW-1 through MW-9) were installed using a track mounted Geoprobe® unit (7822 DT) outfitted with six-inch diameter rods. S&ME personnel screened the soil for VOCs during installation of the monitor wells. No visual indications of contamination or elevated organic vapors were noted during the installation of the monitor wells.

Monitor wells were installed to depths of 15 to 38.5 ft-bgs. Once the total depth of the monitor wells was determined, a 2-inch diameter 10-foot-long section of PVC 0.010-inch slotted well screen was installed with PVC well riser casing installed from the top of the well screen up to two feet above ground surface. A sand pack of #2 filter sand was placed in the annulus between the borehole wall and the well screen up to approximately two feet above the top of the well screen. A bentonite seal was then installed up to approximately two feet above the top of the sand pack. Prior to placing the bentonite in the annulus of the borehole, the well was developed with a submersible pump until turbidity had visually improved. Over five well volumes of water were removed from each well during development. The monitor wells were completed with expandable well caps. The monitor well construction details are presented in **Table 2** and the location of the monitor wells are shown on **Figure 1**. The Coordinates of Selected Features is included in **Appendix I** and the Well Construction Records are included in **Appendix II**.



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3.2 Monitor Well Elevation Measuring, Gauging, and Sampling

On October 1, 2024, the depth to groundwater was measured in each well with an electronic water level meter. A licensed surveyor located and measured horizontal coordinates and vertical elevations for the monitor wells under Task Order 2900RI-6. The approximate depth of groundwater and elevations at each monitor well are displayed on **Table 2** and are represented on **Figure 5** Groundwater Elevation Map. Groundwater generally flows from the waste disposal area toward the stream to the north and east.

Before sample collection, the monitor wells were purged using a monsoon pump, and field parameter data (pH, temperature, conductivity, and turbidity) were recorded (**Table 4**). Groundwater sampling field forms are included with the field documents in **Appendix III**. Once three well volumes were purged, groundwater samples were collected, placed on ice, and sent under the chain-of-custody protocol to Eurofins | Environment Testing America (Eurofins) in Savannah Georgia for analysis of volatile organic compounds (VOCs) by EPA Method 8260D, semi-volatile-organic compounds (SVOCs) by EPA Method 8270E, 1,4 Dioxane by EPA Method 8270E SIM, metals by EPA Method 6020B, mercury by EPA Method 7470A, nitrate and sulfate by EPA Method 300.0, and ammonia by EPA Method 350.1.

MW-2 could not be sampled due to the well having inadequate water volume at the time of sample collection. MW-4 was only analyzed for VOCs by Method 8260D due to a low volume of water that could be sampled from the monitor well.

The laboratory reported detections of multiple constituents above the NCAC 2L Groundwater Standards in all of the groundwater samples. The NCDEQ Risk Calculator was used to assess the risk for soil gas from groundwater to indoor air. All eight of the monitor wells that were sampled exceeded the Residential Receptor Groundwater Use risk level. Five of eight monitor wells that were sampled exceeded the Non-Residential Worker Receptor Groundwater Use risk level. See **Section 4.0** for the Risk Calculator details.

See **Table 5** for a summary of the groundwater analytical results and **Figure 5** for a Groundwater Elevations Map. Groundwater risk assessment results and NCAC 2L Groundwater Standards exceedances are shown on **Figure 4**. A copy of the laboratory report and chain of custody records are included in **Appendix V**.

4.0 NCDEQ Risk Calculator

NCDEQ's Risk Calculator was used to evaluate environmental exposure risks of multiple contaminants and exposure pathways associated with the Landfill Gas Samples and Landfill Cover Soil Samples. The July 2024 version of NCDEQ's Risk Calculator, downloaded from the NCDEQ website was used.

4.1 Landfill Gas Samples

The NCDEQ Risk Calculator was run for each individual soil gas sample location and associated duplicate samples. The risk calculator uses analytical results and generates a Carcinogenic Risk and Hazard Index value. The laboratory results from the following SGP and SGI locations exceeded risk:



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- ◆ Resident Receptor, Soil Gas to Indoor Air Pathway: 25 of 26 sample locations exceeded the Residential Receptor Risk.
- ◆ Non-Residential Worker Receptor, Soil Gas to Indoor Air Pathway: 22 of 26 sample locations exceeded the Non-Residential Receptor.

4.2 Groundwater Samples

The NCDEQ Risk Calculator was run for each individual monitor well. The risk calculator uses analytical results and generates a Carcinogenic Risk and a Hazard Index value.

- ◆ Resident Groundwater Receptor: 8 of 8 monitor wells that were sampled exceeded the Residential Receptor Groundwater Use risk level.
- ◆ Non-Resident Groundwater Worker Receptor: 5 of 8 monitor wells that were sampled exceeded the Non-Residential Worker Receptor Groundwater Use risk level.

Appendix V contains the NCDEQ Risk Calculator Inputs and Outputs.

5.0 Quality Control

Quality control samples were collected and analyzed as follows:

Soil Gas Duplicates

- One SGP duplicate sample was collected for each day of sampling. Duplicates were taken at SGP-3 (DUP-1), SGP-11 (DUP-2), SGP-20 (DUP-3), and SGI-25 (DUP-4) and analyzed for the same parameters as the record sample. Analytical results of the duplicate samples were within an acceptable relative difference with the record samples.

Groundwater Duplicates

- One duplicate sample was collected for the one day of sampling. DUP-1 was taken at MW-3 and analyzed for the same parameters as the record sample. Analytical results of the duplicate sample was within an acceptable relative difference with the record sample.

Trip Blank

- One trip blank sample of laboratory provided Deionized Water was kept with the laboratory samples throughout the groundwater sampling event and analyzed for VOCs by 8260D. No analytes were reported above the laboratory's minimum detection limit.

The laboratory conducted USEPA quality assurance and quality control procedures and reporting as required for laboratory analysis according to USEPA Level II Protocols. Reported laboratory analytical data met data quality objectives.



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6.0 Deviation From Work Plan

Five proposed soil gas locations (SGP-15, SGP-16, SGP-17, SGP-30, and SGP-31) were not installed due to shallow groundwater in the intended boring locations.

One groundwater monitor well (MW-10) was not installed due to a near surface water level in the intended location near a surface wet area.

MW-2 could not be sampled due to no obtainable water in the monitor well. MW-4 was only analyzed for VOCs by Method 8260D due to a low volume of water available.

The surveyor apparently did not locate monitor well MW-3 and record the associated coordinates and elevations. MW-3 will be surveyed during a future field event.

7.0 Sole Use Statement

This report is solely intended for use by NCDEQ for the services that were performed in accordance with S&ME Proposal No. 23050459C, Revision 1, dated July 9, 2024, for Task Order 2900RI-8 as authorized by NCDEQ.



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S&ME Project No. 23050459

8.0 Certification Acknowledgement

"I certify that to the best of my knowledge, after thorough investigation, the information contained in or accompanying this certification is true, accurate, and complete."

Thomas Raymond / S&ME, Inc.

Name of Environmental Consultant / Company



Signature of Environmental Consultant

March 6, 2025

Date

I, GAIL L. Kluever, a Notary Public of said County and State, do hereby certify that Thomas P. Raymond did personally appear and sign before me this day, produced proper identification in the form of Driver License, was duly sworn or affirmed, and declared that, he or she is the duly authorized environmental consultant referenced above and that, to the best of his or her knowledge and belief, after thorough investigation, the information contained in the above certification is true and accurate, and he or she then signed this Certification in my presence.

WITNESS my hand and official seal this 6th day of March, 2025.

(OFFICIAL SEAL)

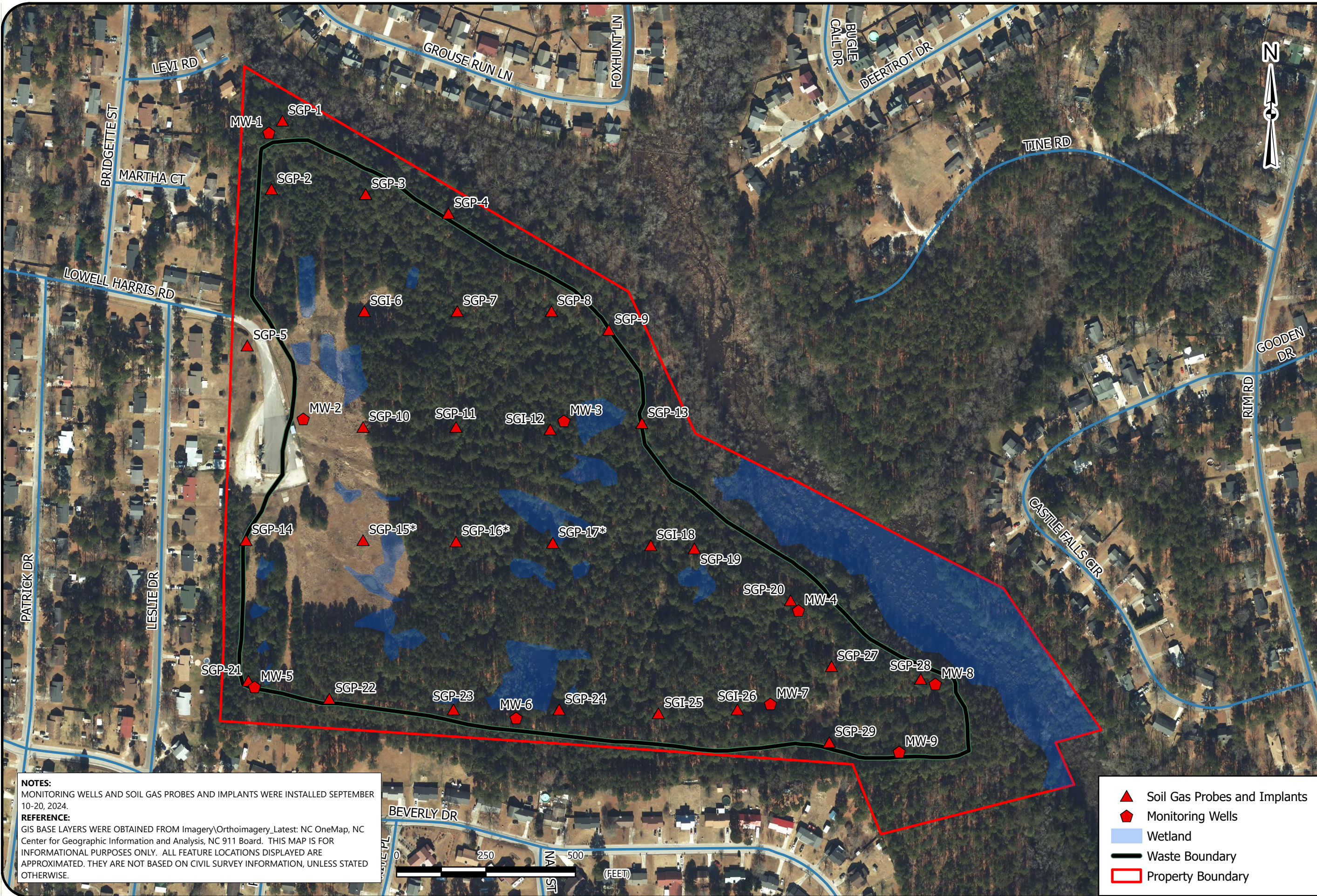


Notary Public (signature)

My commission expires: 7/26/2026



Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ LE_Cumberland County - Cliffdale LF 7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files



NOTES:
MONITORING WELLS AND SOIL GAS PROBES AND IMPLANTS WERE INSTALLED SEPTEMBER 10-20, 2024.
REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

- ▲ Soil Gas Probes and Implants
- ◆ Monitoring Wells
- Wetland
- Waste Boundary
- Property Boundary



SITE MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-8
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in: 250 feet

DATE:
12/3/2024

PROJECT NUMBER
23050459

FIGURE NO.
1

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NOTES:
 LANDFILL GAS SCREENING WAS CONDUCTED ON SEPTEMBER 26, 2024.
 -VOLATILE ORGANIC COMPOUNDS (VOC) IS MEASURED IN ppm-v.
 -HYDROGEN SULFIDE IS MEASURED IN ppm-v.
 -ppm-v: PARTS PER MILLION BY VOLUME
 -LOWER EXPLOSIVE LIMIT (LEL) FOR METHANE IS 5% BY VOLUME. THE SCREENING LEVEL IS 1.25% BY VOLUME
 - EXCEEDANCES OF METHANE LEL AND SCREENING LEVEL LEL ARE SHOWN IN RED

REFERENCE:
 GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthoimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

- ▲ Soil Gas Probes and Implants
- Wetland
- Waste Boundary
- Property Boundary



LANDFILL GAS SCREENING RESULTS

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
 NCDEQ ID NCD980502900 TASK ORDER 2900RI-8
 7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

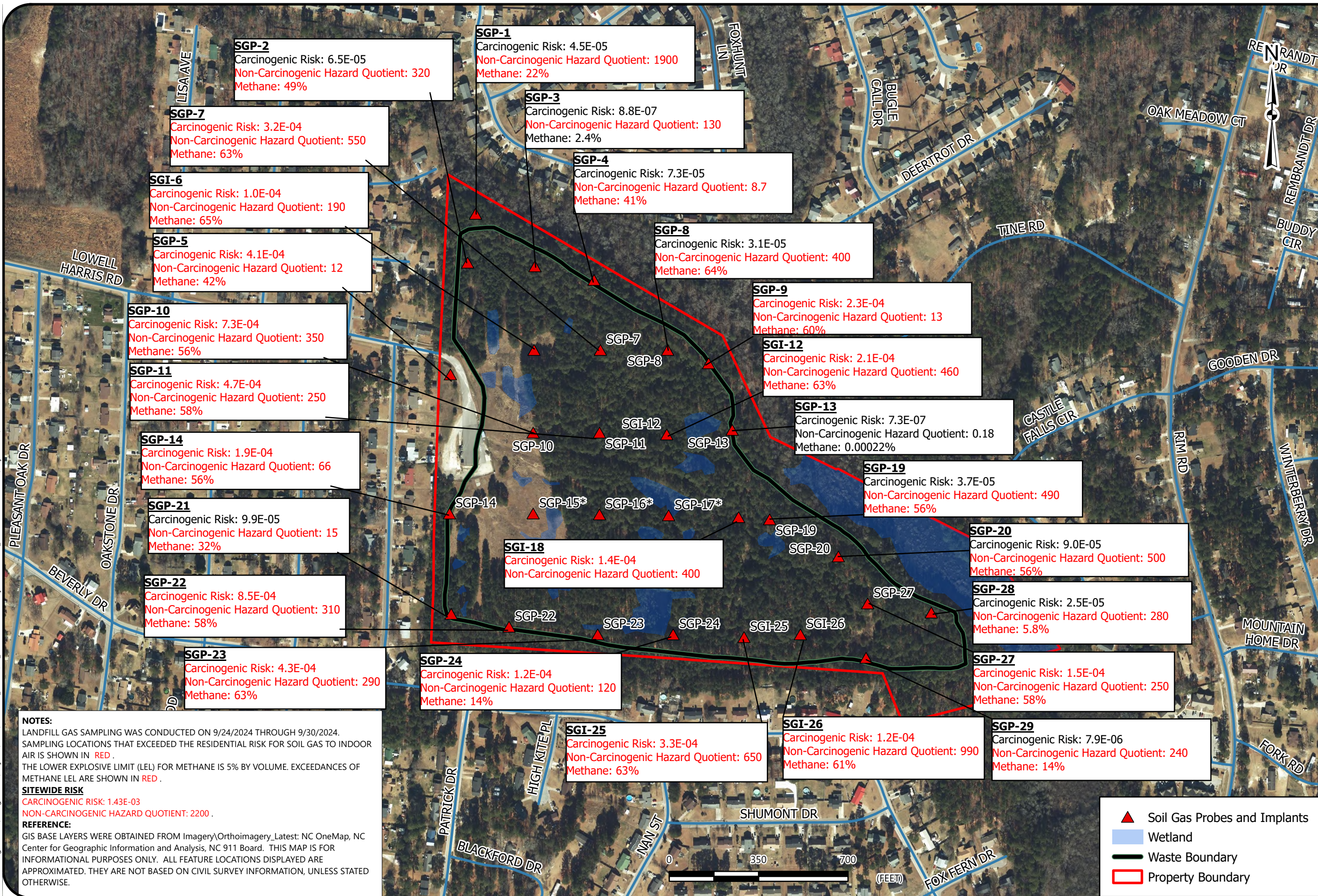
SCALE:
 1 in: 350 feet

DATE:
 11/20/2024

PROJECT NUMBER
 23050459

FIGURE NO.

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDCEQ_LE_Cumberland County - Cliffdale LE 7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files



SGP-2
 Carcinogenic Risk: 6.5E-05
 Non-Carcinogenic Hazard Quotient: 320
 Methane: 49%

SGP-1
 Carcinogenic Risk: 4.5E-05
 Non-Carcinogenic Hazard Quotient: 1900
 Methane: 22%

SGP-7
 Carcinogenic Risk: 3.2E-04
 Non-Carcinogenic Hazard Quotient: 550
 Methane: 63%

SGP-3
 Carcinogenic Risk: 8.8E-07
 Non-Carcinogenic Hazard Quotient: 130
 Methane: 2.4%

SGI-6
 Carcinogenic Risk: 1.0E-04
 Non-Carcinogenic Hazard Quotient: 190
 Methane: 65%

SGP-4
 Carcinogenic Risk: 7.3E-05
 Non-Carcinogenic Hazard Quotient: 8.7
 Methane: 41%

SGP-5
 Carcinogenic Risk: 4.1E-04
 Non-Carcinogenic Hazard Quotient: 12
 Methane: 42%

SGP-8
 Carcinogenic Risk: 3.1E-05
 Non-Carcinogenic Hazard Quotient: 400
 Methane: 64%

SGP-9
 Carcinogenic Risk: 2.3E-04
 Non-Carcinogenic Hazard Quotient: 13
 Methane: 60%

SGP-10
 Carcinogenic Risk: 7.3E-04
 Non-Carcinogenic Hazard Quotient: 350
 Methane: 56%

SGI-12
 Carcinogenic Risk: 2.1E-04
 Non-Carcinogenic Hazard Quotient: 460
 Methane: 63%

SGP-11
 Carcinogenic Risk: 4.7E-04
 Non-Carcinogenic Hazard Quotient: 250
 Methane: 58%

SGP-13
 Carcinogenic Risk: 7.3E-07
 Non-Carcinogenic Hazard Quotient: 0.18
 Methane: 0.00022%

SGP-14
 Carcinogenic Risk: 1.9E-04
 Non-Carcinogenic Hazard Quotient: 66
 Methane: 56%

SGP-19
 Carcinogenic Risk: 3.7E-05
 Non-Carcinogenic Hazard Quotient: 490
 Methane: 56%

SGP-21
 Carcinogenic Risk: 9.9E-05
 Non-Carcinogenic Hazard Quotient: 15
 Methane: 32%

SGP-20
 Carcinogenic Risk: 9.0E-05
 Non-Carcinogenic Hazard Quotient: 500
 Methane: 56%

SGP-22
 Carcinogenic Risk: 8.5E-04
 Non-Carcinogenic Hazard Quotient: 310
 Methane: 58%

SGP-28
 Carcinogenic Risk: 2.5E-05
 Non-Carcinogenic Hazard Quotient: 280
 Methane: 5.8%

SGP-23
 Carcinogenic Risk: 4.3E-04
 Non-Carcinogenic Hazard Quotient: 290
 Methane: 63%

SGP-24
 Carcinogenic Risk: 1.2E-04
 Non-Carcinogenic Hazard Quotient: 120
 Methane: 14%

SGP-27
 Carcinogenic Risk: 1.5E-04
 Non-Carcinogenic Hazard Quotient: 250
 Methane: 58%

SGI-25
 Carcinogenic Risk: 3.3E-04
 Non-Carcinogenic Hazard Quotient: 650
 Methane: 63%

SGI-26
 Carcinogenic Risk: 1.2E-04
 Non-Carcinogenic Hazard Quotient: 990
 Methane: 61%

SGP-29
 Carcinogenic Risk: 7.9E-06
 Non-Carcinogenic Hazard Quotient: 240
 Methane: 14%

NOTES:
 LANDFILL GAS SAMPLING WAS CONDUCTED ON 9/24/2024 THROUGH 9/30/2024.
 SAMPLING LOCATIONS THAT EXCEEDED THE RESIDENTIAL RISK FOR SOIL GAS TO INDOOR AIR IS SHOWN IN RED.
 THE LOWER EXPLOSIVE LIMIT (LEL) FOR METHANE IS 5% BY VOLUME. EXCEEDANCES OF METHANE LEL ARE SHOWN IN RED.

SITEWIDE RISK
 CARCINOGENIC RISK: 1.43E-03
 NON-CARCINOGENIC HAZARD QUOTIENT: 2200.

REFERENCE:
 GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthoimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

- ▲ Soil Gas Probes and Implants
- Wetland
- Waste Boundary
- Property Boundary



LANDFILL GAS RISK ASSESSMENT & LABORATORY METHANE RESULTS MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
 NCDEQ ID NCD980502900 TASK ORDER 2900RI-8
 7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
 1 in: 350 feet

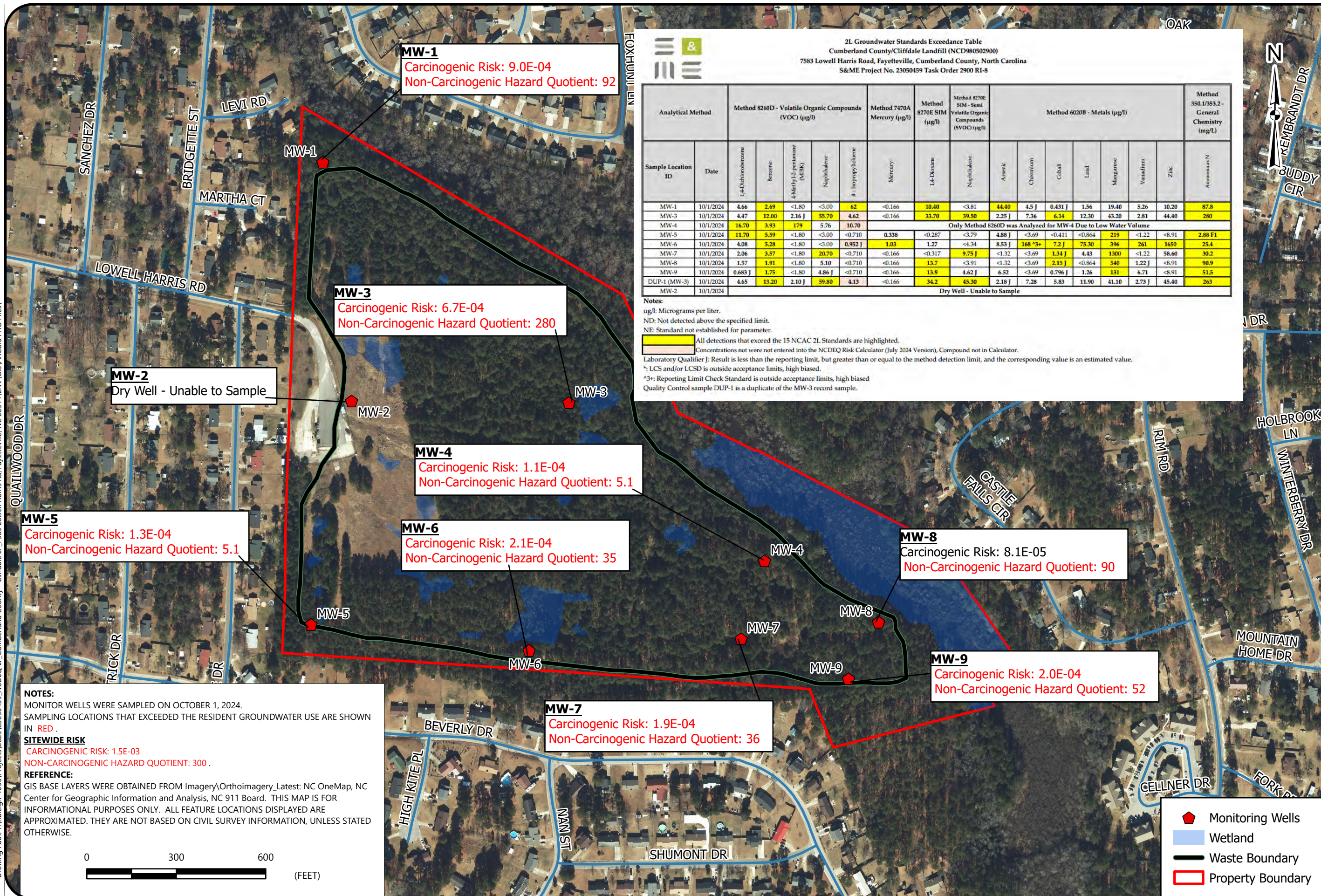
DATE:
 11/26/2024

PROJECT NUMBER
 23050459

FIGURE NO.

3

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCD980502900 - Cliffdale LF, Fayetteville, NC 28314\ENV\GIS\ARC\GIS PRO Files



NOTES:
 MONITOR WELLS WERE SAMPLED ON OCTOBER 1, 2024.
 SAMPLING LOCATIONS THAT EXCEEDED THE RESIDENT GROUNDWATER USE ARE SHOWN IN RED.

SITEWIDE RISK
 CARCINOGENIC RISK: 1.5E-03
 NON-CARCINOGENIC HAZARD QUOTIENT: 300.

REFERENCE:
 GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthoimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

MW-1
 Carcinogenic Risk: 9.0E-04
 Non-Carcinogenic Hazard Quotient: 92

MW-3
 Carcinogenic Risk: 6.7E-04
 Non-Carcinogenic Hazard Quotient: 280

MW-2
 Dry Well - Unable to Sample

MW-4
 Carcinogenic Risk: 1.1E-04
 Non-Carcinogenic Hazard Quotient: 5.1

MW-5
 Carcinogenic Risk: 1.3E-04
 Non-Carcinogenic Hazard Quotient: 5.1

MW-6
 Carcinogenic Risk: 2.1E-04
 Non-Carcinogenic Hazard Quotient: 35

MW-8
 Carcinogenic Risk: 8.1E-05
 Non-Carcinogenic Hazard Quotient: 90

MW-9
 Carcinogenic Risk: 2.0E-04
 Non-Carcinogenic Hazard Quotient: 52

MW-7
 Carcinogenic Risk: 1.9E-04
 Non-Carcinogenic Hazard Quotient: 36

2L Groundwater Standards Exceedance Table
 Cumberland County/Cliffdale Landfill (NCD980502900)
 7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
 S&ME Project No. 23050459 Task Order 2900 RI-8

Analytical Method	Method 8260D - Volatile Organic Compounds (VOC) (µg/l)					Method 7470A Mercury (µg/l)	Method 8270E SIM (µg/l)	Method 8270E SIM - Semi Volatile Organic Compounds (SVOC) (µg/l)	Method 6020B - Metals (µg/l)							Method 350.1/353.2 - General Chemistry (mg/L)	
	1,4-Dichlorobenzene	Benzene	4-Methyl-2-pentanone (MIBK)	Naphthalene	1,1-Dichloroethene				Mercury	1,4-Dioxane	Naphthalene	Arsenic	Chromium	Cobalt	Lead		Manganese
MW-1	10/1/2024	4.66	2.69	<1.80	<3.00	62	<0.166	10.40	<3.81	44.40	4.5 J	0.431 J	1.56	19.40	5.26	10.20	87.8
MW-3	10/1/2024	4.47	12.00	2.16 J	55.70	4.62	<0.166	33.70	39.50	2.25 J	7.36	6.14	12.30	43.20	2.81	44.40	280
MW-4	10/1/2024	16.70	3.93	179	5.76	10.70	Only Method 8260D was Analyzed for MW-4 Due to Low Water Volume										
MW-5	10/1/2024	11.70	5.59	<1.80	<3.00	<0.710	0.338	<0.287	<3.79	4.88 J	<3.69	<0.411	<0.864	219	<1.22	<8.91	2.88 F1
MW-6	10/1/2024	4.08	5.28	<1.80	<3.00	0.952 J	1.03	1.27	<4.34	8.53 J	168 *3+	7.2 J	75.30	396	261	1650	25.4
MW-7	10/1/2024	2.06	3.57	<1.80	20.70	<0.710	<0.166	<0.317	9.75 J	<1.32	<3.69	1.34 J	4.43	1300	<1.22	58.60	30.2
MW-8	10/1/2024	1.57	1.91	<1.80	5.10	<0.710	<0.166	13.7	<3.91	<1.32	<3.69	2.15 J	<0.864	540	1.22 J	<8.91	90.9
MW-9	10/1/2024	0.683 J	1.75	<1.80	4.86 J	<0.710	<0.166	13.9	4.62 J	6.52	<3.69	0.796 J	1.26	131	6.71	<8.91	51.5
DUP-1 (MW-3)	10/1/2024	4.65	13.20	2.10 J	59.80	4.13	<0.166	34.2	45.30	2.18 J	7.28	5.83	11.90	41.10	2.73 J	45.40	263
MW-2	10/1/2024	Dry Well - Unable to Sample															

Notes:
 ug/l: Micrograms per liter.
 ND: Not detected above the specified limit.
 NE: Standard not established for parameter.
 All detections that exceed the 15 NCAC 2L Standards are highlighted.
 Concentrations not were not entered into the NCDEQ Risk Calculator (July 2024 Version), Compound not in Calculator.
 Laboratory Qualifier J: Result is less than the reporting limit, but greater than or equal to the method detection limit, and the corresponding value is an estimated value.
 *: LCS and/or LCSD is outside acceptance limits, high biased.
 *3+: Reporting Limit Check Standard is outside acceptance limits, high biased
 Quality Control sample DUP-1 is a duplicate of the MW-3 record sample.

GROUNDWATER ANALYTICAL RESULTS & RISK ASSESSMENT MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
 NCDEQ ID NCD980502900 TASK ORDER 2900RI-8
 7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

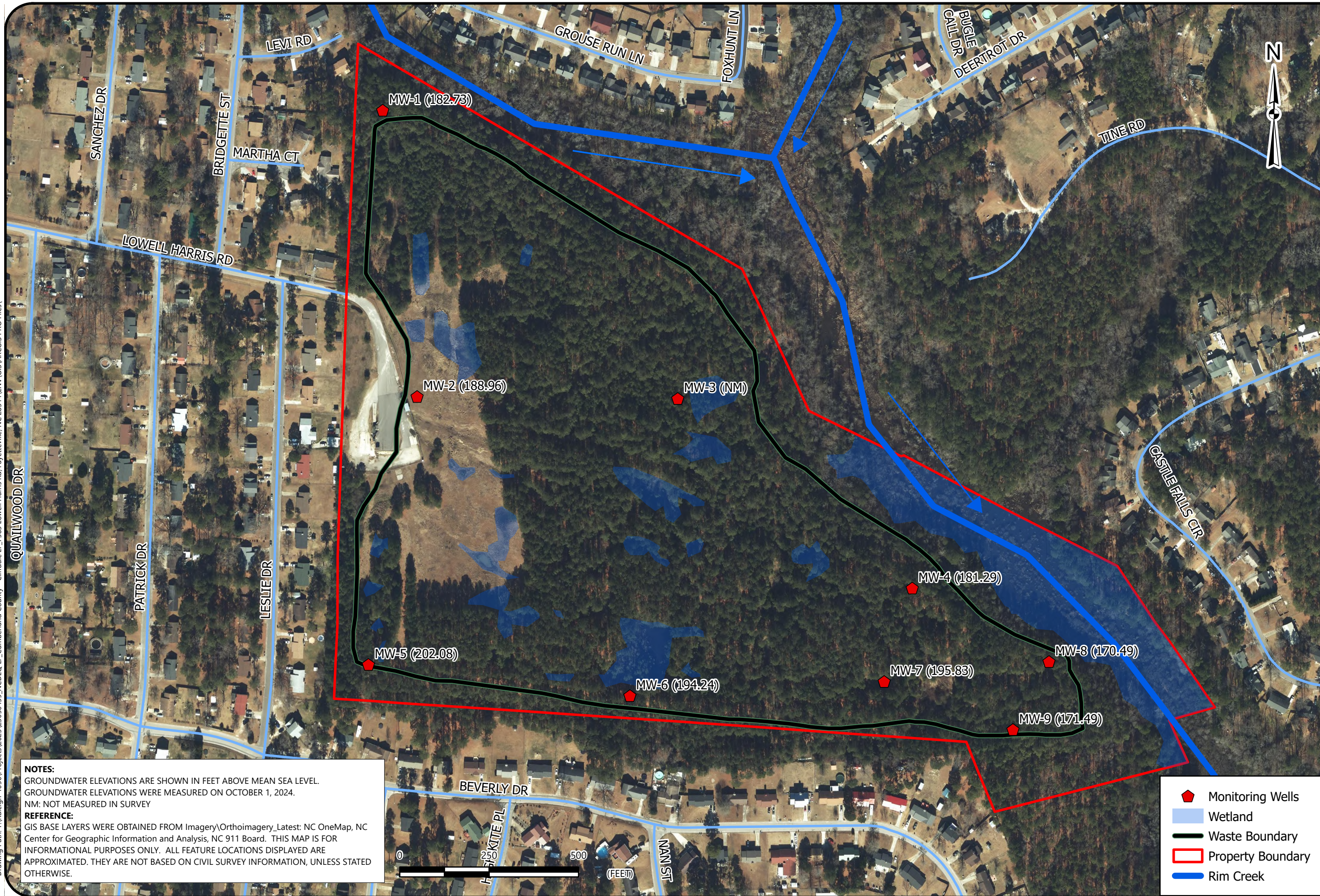
SCALE:
1 in: 300 feet

DATE:
11/27/2024

PROJECT NUMBER
23050459

FIGURE NO.
4

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ LE_Cumberland County - Cliffdale LF 7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\



NOTES:
 GROUNDWATER ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL.
 GROUNDWATER ELEVATIONS WERE MEASURED ON OCTOBER 1, 2024.
 NM: NOT MEASURED IN SURVEY

REFERENCE:
 GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthoimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

- ◆ Monitoring Wells
- Wetland
- Waste Boundary
- Property Boundary
- Rim Creek



GROUNDWATER ELEVATION MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
 NCDEQ ID NCD980502900 TASK ORDER 2900R1-8
 7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in: 250 feet

DATE:
11/21/2024

PROJECT NUMBER
23050459

FIGURE NO.

5



TABLE 1
Landfill Gas Probe & Gas Implant Construction Details
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-8

ID	Date Installed	Type	Casing Material	Stickup Height (ft)	Total Depth (ft-bgs)	Casing Interval (ft-bgs)	Screen Interval (ft-bgs)	Grout Interval (ft-bgs)	Bentonite Interval (ft-bgs)	Filter Pack Interval (ft-bgs)
SGP-1	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-2	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-3	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-4	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-5	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGI-6	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	5.0	NA	4.5 - 5.0	0.0 - 1.0	1.0 - 4.0	4.0 - 5.0
SGP-7	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	4.0 - 7.0
SGP-8	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGP-9	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-10	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGP-11	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGI-12	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 4.0	3.0 - 4.0
SGP-13	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-14	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-15	9/11/24	Soil Gas Probes Abandoned Due to Shallow Groundwater								
SGP-16										
SGP-17										
SGP-18	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 3.0	3.0 - 4.0
SGP-19	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGP-20	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 6.0	6.0 - 10.0	0.0 - 4.0	4.0 - 5.0	5.0 - 10.0
SGP-21	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-22	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGP-23	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-24	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGI-25	9/12/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 3.0	3.0 - 4.0
SGI-26	9/12/24	Flushmount-Gas Implant	1/4" tubing	0.0	5.0		4.5 - 5.0	0.0 - 1.0	1.0 - 3.0	4.0 - 5.0
SGP-27	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 6.0	6.0 - 10.0	0.0 - 4.0	4.0 - 5.0	5.0 - 10.0
SGP-28	9/18/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	4.0 - 7.0
SGP-29	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-30	9/18/2024	Soil Gas Probe Abandoned Due to Shallow Groundwater								
SGP-31										

Notes:

SGI were used in areas of shallow groundwater

SGP-15, 16, 17, SGP-30, and SGP-31 were abandoned due to shallow groundwater

ft-bgs: feet below ground surface.

in: inches

N/A: Not Applicable

The Soil Gas Probe and Implant locations are indicated on **Figure 1**.



TABLE 1
Groundwater Monitor Well Construction & Groundwater Level
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-8

ID	Date Installed	Type	Casing Material	Stickup Height (ft)	Total Depth (ft-bgs)	Casing Interval (ft-bgs)	Screen Interval (ft-bgs)	Grout Interval (ft-bgs)	Bentonite Interval (ft-bgs)	Filter Pack Interval (ft-bgs)	Top of Casing Elevation (ft-amsl)	Date Water Level Measured	Depth to Groundwater (ft-btoc)	Groundwater Elevation (ft-amsl)
MW-1	9/10/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.0	38.5	0.0 - 28.5	28.5 - 38.5	0.0 - 24.5	24.5 - 26.5	26.5 - 38.5	218.79	10/1/2024	33.56	185.23
MW-2	9/11/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.8	30.0	0.0 - 20.0	20.0 - 30.0	0.0 - 16.0	16.0 - 18.0	18.0 - 30.0	224.98	10/1/2024	33.52	191.46
MW-3	9/11/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.4	15.0	0.0 - 5.0	5.0 - 15.0	0.0 - 2.0	2.0 - 3.0	3.0 - 15.0	Not Surveyed	10/1/2024	14.24	Not Surveyed
MW-4	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.0	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	213.66	10/1/2024	29.87	183.79
MW-5	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.5	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	228.46	10/1/2024	23.88	204.58
MW-6	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.5	25.0	0.0 - 15.0	15.0 - 25.0	0.0 - 11.0	11.0 - 13.0	13.0 - 25.0	219.95	10/1/2024	23.21	196.74
MW-7	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.6	14.0	0.0 - 4.0	4.0 - 14.0	0.0 - 2.0	2.0 - 3.0	3.0 - 14.0	208.93	10/1/2024	10.6	198.33
MW-8	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.4	14.0	0.0 - 4.0	4.0 - 14.0	0.0 - 2.0	2.0 - 3.0	3.0 - 14.0	185.67	10/1/2024	12.68	172.99
MW-9	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.9	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	181.60	10/1/2024	7.61	173.99
MW-10	9/18/2024	Monitoring Well Abandoned Due to Shallow Groundwater Near Surface Wet Area												

Notes:

MW-10 was abandoned due to shallow groundwater
ft-bgs: feet below ground surface.
in: inches
MW-3 was not included in the surveyor report
Monitoring Well locations are indicated on **Figure 1**.



TABLE 3
Landfill Gas Field Screening Results
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-8

Field Parameter		Volatile Organic Compounds (ppm-v)	Methane (Volume in Air %)	Methane (% Lower Explosive Limit)	Hydrogen Sulfide (ppm-v)
Sample ID	Screening Date				
BG-1	9/26/2024	0	0	0	0
SGP-1	9/26/2024	0.5	22.8	>>>	98
SGP-2	9/26/2024	1.2	52.4	>>>	3
SGP-3	9/26/2024	1.1	49.8	>>>	2
SGP-4	9/26/2024	0.3	35.0	>>>	0
SGP-5	9/26/2024	1.2	10.2	>>>	0
SIG-6	9/26/2024	0.8	54.2	>>>	14
SGP-7	9/26/2024	2.1	58.9	>>>	12
SGP-8	9/26/2024	0.2	65.3	>>>	20
SGP-9	9/26/2024	1.8	62.6	>>>	0
SGP-10	9/26/2024	3.5	59.2	>>>	11
SGP-11	9/26/2024	2.1	61.2	>>>	13
SIG-12	9/26/2024	3.3	68.4	>>>	18
SGP-13	9/26/2024	2.1	61.2	>>>	1
SGP-14	9/26/2024	4.3	60.2	>>>	2
SIG-18	9/26/2024	1.2	58.0	>>>	22
SGP-19	9/26/2024	1.6	57.7	>>>	27
SGP-20	9/26/2024	0.0	57.4	>>>	46
SGP-21	9/26/2024	1.1	21.2	>>>	2
SGP-22	9/26/2024	0.8	48.9	>>>	9
SGP-23	9/26/2024	0.6	60.5	>>>	12
SGP-24	9/26/2024	1.1	26.5	>>>	0
SIG-25	9/26/2024	1.6	61.7	>>>	16
SIG-26	9/26/2024	0	53.5	>>>	22
SGP-27	9/26/2024	0	0	0	0
SGP-28	9/26/2024	0	0	0	0
SGP-29	9/26/2024	1.5	60.3	>>>	13

Notes:

Percent %: Percent methane in air, Lower Explosive Limit for Methane is 5%.

PPM-V: Parts Per Million by Volume in Air

Bold indicates a concentration greater than background concentrations.

Highlighted indicates a concentration exceeding the lower explosive limit for methane

>>>: Greater than 100% LEL for Methane.

See **Figure 2** for sample Locations.



TABLE 4
Groundwater Field Screening Parameters
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-8

Sample Location ID	Date	Field Parameter			
		pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)
MW-1	10/1/2024	7.2	19.8	1,239	52.00
MW-2	10/1/2024	Unable to Record Field Parameters Due to Low Water in Volume			
MW-3	10/1/2024	6.3	21.4	4	6.90
MW-4	10/1/2024	Unable to Record Field Parameters Due to Low Water Volume			
MW-5	10/1/2024	6.9	20.2	789	9.20
MW-6	10/1/2024	6.9	21.0	806	1228
MW-7	10/1/2024	5.3	22.7	898	2.70
MW-8	10/1/2024	5.7	21.4	1,822	1.30
MW-9	10/1/2024	5.4	20.8	1,519	8.90

Notes:

Temperature: degrees Celsius (°C)

Conductivity: microsiemens per centimeter (µS/cm)

Turbidity: Nephelometric Turbidity Units

Appendices

Appendix I – Coordinates of Selected Features



APPENDIX I
Coordinates of Selected Features
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-8

Site Feature	Type	Location			
		Latitude	Longitude	Northing	Easting
SGP-1	Soil Gas Probe	1983110.364	471512.3403	471512.3403	1983110.364
SGP-2	Soil Gas Probe	1983079.613	471320.9985	471320.9985	1983079.613
SGP-3	Soil Gas Probe	1983342.992	471306.7616	471306.7616	1983342.992
SGP-4	Soil Gas Probe	1983574.339	471253.374	471253.374	1983574.339
SGP-5	Soil Gas Probe	1983011.988	470883.2192	470883.2192	1983011.988
SGI-6	Soil Gas Implant	1983339.433	470979.3171	470979.3171	1983339.433
SGP-7	Soil Gas Probe	1983599.254	470979.3171	470979.3171	1983599.254
SGP-8	Soil Gas Probe	1983862.633	470979.3171	470979.3171	1983862.633
SGP-9	Soil Gas Probe	1984022.939	470926.9258	470926.9258	1984022.939
SGP-10	Soil Gas Probe	1983335.874	470655.4316	470655.4316	1983335.874
SGP-11	Soil Gas Probe	1983595.694	470655.4316	470655.4316	1983595.694
SGI-12	Soil Gas Implant	1983859.074	470648.3132	470648.3132	1983859.074
SGP-13	Soil Gas Probe	1984115.335	470666.1091	470666.1091	1984115.335
SGP-14	Soil Gas Probe	1983008.429	470338.6645	470338.6645	1983008.429
SGP-15*	Abandoned SGP	1983335.874	470338.6645	470338.6645	1983335.874
SGP-16*	Abandoned SGP	1983595.694	470335.1055	470335.1055	1983595.694
SGP-17*	Abandoned SGP	1983866.192	470331.5461	470331.5461	1983866.192
SGI-18	Soil Gas Implant	1984140.249	470324.4277	470324.4277	1984140.249
SGP-19	Soil Gas Probe	1984261.973	470315.7433	470315.7433	1984261.973
SGP-20	Soil Gas Probe	1984530.938	470170.5687	470170.5687	1984530.938
SGP-21	Soil Gas Probe	1983014.956	469945.5314	469945.5314	1983014.956
SGP-22	Soil Gas Probe	1983241.376	469895.4124	469895.4124	1983241.376
SGP-23	Soil Gas Probe	1983588.576	469865.2934	469865.2934	1983588.576
SGP-24	Soil Gas Probe	1983883.988	469865.2934	469865.2934	1983883.988
SGI-25	Soil Gas Implant	1984161.604	469854.6159	469854.6159	1984161.604
SGI-26	Soil Gas Implant	1984382.273	469865.2934	469865.2934	1984382.273
SGP-27	Soil Gas Probe	1984645.653	469986.3056	469986.3056	1984645.653
SGP-28	Soil Gas Probe	1984894.795	469950.7138	469950.7138	1984894.795
SGP-29	Soil Gas Probe	1984639.307	469773.6233	469773.6233	1984639.307
MW-1	Monitor Well	1983072.495	471477.6025	471477.6025	1983072.495
MW-2	Monitor Well	1983168.593	470676.7865	470676.7865	1983168.593
MW-3	Monitor Well	1983897.557	470671.2255	470671.2255	1983897.557
MW-4	Monitor Well	1984553.323	470140.8401	470140.8401	1984553.323
MW-5	Monitor Well	1983032.541	469927.1263	469927.1263	1983032.541
MW-6	Monitor Well	1983763.796	469840.0261	469840.0261	1983763.796
MW-7	Monitor Well	1984474.812	469879.5303	469879.5303	1984474.812
MW-8	Monitor Well	1984935.797	469935.3379	469935.3379	1984935.797
MW-9	Monitor Well	1984834.931	469745.1404	469745.1404	1984834.931

Notes:

Site feature locations are reported in decimal degrees for Latitude/Longitude and in feet in the North Carolina State Plane Coordinate System (NAD83).

Appendix II – Soil Gas Probes & Well Construction Logs

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-1

5a. Well Location:

Cumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair, fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 1011 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use _____

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES						
FROM	TO	DESCRIPTION				
ft.	ft.					
ft.	ft.					
15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)						
FROM	TO	DIAMETER	THICKNESS	MATERIAL		
ft.	ft.	in.				
16. INNER CASING OR TUBING (geothermal closed-loop)						
FROM	TO	DIAMETER	THICKNESS	MATERIAL		
6 ft.	0 ft.	1 in.	sch. 40	PVC		
ft.	ft.	in.				
17. SCREEN						
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL	
11 ft.	6 ft.	1 in.	0.01	sch. 40	PVC	
ft.	ft.	in.				
18. GROUT						
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT			
5 ft.	4 ft.	Bentonite				
4 ft.	0 ft.	Grout				
ft.	ft.					
19. SAND/GRAVEL PACK (if applicable)						
FROM	TO	MATERIAL	EMPLACEMENT METHOD			
11 ft.	5 ft.	#2 med	POUR			
ft.	ft.					
20. DRILLING LOG (attach additional sheets if necessary)						
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)				
ft.	ft.					
ft.	ft.					
ft.	ft.					
ft.	ft.					
ft.	ft.					
ft.	ft.					
ft.	ft.					
21. REMARKS						

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. UIC, County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed:

9/10 - 9/13
9/18 - 9/19

Well ID#

SGP-2

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 11 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
11 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
11 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

Well Contractor Name: T. Bohard

Well Contractor Certification Number: 3307

Company Name: Environmental Drilling & Probing Services, LLC.

2. Well Construction Permit #: WM0401313
List all applicable well construction permits (i.e. WIC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-3

5a. Well Location: 9/18 - 9/19
Cumberland/Cliffdale Landfill
 Facility/Owner Name: _____ Facility ID# (if applicable): _____

7583 Lowell Harris Rd. Fayetteville, Nc
 Physical Address, City, and Zip
Cumberland
 County Parcel Identification No. (PIN): _____

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
 (if well field, one lat/long is sufficient)
 _____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 1 @ 11 (ft.)
For multiple wells list all depths if different (example: 3@200 and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:	
13a. Yield (gpm) _____	Method of test: _____
13b. Disinfection type: _____	Amount: _____

For Internal Use Only:

14. WATER ZONES					
FROM	TO	DESCRIPTION			
ft.	ft.				
ft.	ft.				
15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
ft.	ft.	in.			
16. INNER CASING OR TUBING (geothermal closed-loop)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
ft.	ft.	in.			
<u>6</u>	<u>0</u>	<u>1</u>	<u>Sch. 40</u>	<u>PVC</u>	
ft.	ft.	in.			
17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
ft.	ft.	in.			
<u>11</u>	<u>6</u>	<u>1</u>	<u>0.01</u>	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.			
18. GROUT					
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT		
ft.	ft.				
<u>5</u>	<u>4</u>	<u>Bentonite</u>	<u>pour</u>		
<u>4</u>	<u>0</u>	<u>Grout</u>	<u>pour</u>		
ft.	ft.				
19. SAND/GRAVEL PACK (if applicable)					
FROM	TO	MATERIAL	EMPLACEMENT METHOD		
ft.	ft.				
<u>11</u>	<u>5</u>	<u>#2 med.</u>	<u>pour</u>		
ft.	ft.				
20. DRILLING LOG (attach additional sheets if necessary)					
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)			
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
21. REMARKS					

22. Certification:
 Signature of Certified Well Contractor: [Signature] Date: 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:
 You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. UIC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-4
9/18 - 9/19

5a. Well Location:
Cumberland / Cliffdale Landfill
 Facility/Owner Name Facility ID# (if applicable)
7583 Lowell Harris Rd. Fayetteville, NC
 Physical Address, City, and Zip
Cumberland
 County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
 (if well field, one lat/long is sufficient)
 _____ N _____ W

6. Is(are) the well(s): Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
 If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 11 (ft.)
 For multiple wells list all depths if different (example - 3@200 and 2@100)

10. Static water level below top of casing: _____ (ft.)
 If water level is above casing, use _____

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
 (i.e. auger rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ **Method of test:** _____

13b. Disinfection type: _____ **Amount:** _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
11 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
11 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:
 Signature of Certified Well Contractor: [Signature] Date: 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
 You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following:
 Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following:
 Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. LWC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-5

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1011 (ft.)
For multiple wells list all depths if different (example: 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES		DESCRIPTION
FROM	TO	
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
<u>6</u> ft.	<u>0</u> ft.	<u>1</u> in.	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.		

17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
<u>11</u> ft.	<u>6</u> ft.	<u>1</u> in.	<u>0.01</u>	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.			

18. GROUT			
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
<u>5</u> ft.	<u>4</u> ft.	<u>Bentonite</u>	<u>pour</u>
<u>4</u> ft.	<u>0</u> ft.	<u>Grout</u>	<u>pour</u>
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)			
FROM	TO	MATERIAL	EMPLACEMENT METHOD
<u>11</u> ft.	<u>5</u> ft.	<u>#2 med.</u>	<u>pour</u>
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)		
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. **For All Wells:** Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. **For Injection Wells:** In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. LDC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Municipal/Public, Geothermal (Heating/Cooling Supply), Residential Water Supply (single), Industrial/Commercial, Residential Water Supply (shared), Irrigation

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Groundwater Remediation, Aquifer Storage and Recovery, Salinity Barrier, Aquifer Test, Stormwater Drainage, Experimental Technology, Subsidence Control, Geothermal (Closed Loop), Tracer, Geothermal (Heating/Cooling Return), Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# SGP-7

5a. Well Location:

9/18-9/19

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 127 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES, 15. OUTER CASING, 16. INNER CASING, 17. SCREEN, 18. GROUT, 19. SAND/GRAVEL PACK, 20. DRILLING LOG, 21. REMARKS

22. Certification:

Signature of Certified Well Contractor Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C .0100 or 15A NCAC 02C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details: You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. UTC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed:

9/10 - 9/13
9/18 - 9/19

Well ID#

SGP-8

5a. Well Location:

Cumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 7 (ft.)

For multiple wells list all depths if different (example: 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)

If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
<u>6</u> ft.	<u>0</u> ft.	<u>1</u> in.	<u>Sch.40</u>	<u>PVC</u>
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
<u>7</u> ft.	<u>6</u> ft.	<u>1</u> in.	<u>0.01</u>	<u>Sch.40</u>	<u>PVC</u>
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
<u>5</u> ft.	<u>4</u> ft.	<u>Bentonite</u>	<u>pour</u>
<u>4</u> ft.	<u>0</u> ft.	<u>Grout</u>	<u>pour</u>
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
<u>7</u> ft.	<u>5</u> ft.	<u>#2 med.</u>	<u>pour</u>
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

[Signature]
Signature of Certified Well Contractor

9/25/24
Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. LJC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agncultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# SGP-9

5a. Well Location: Cumberland/Cliffdale Landfill

Facility/Owner Name: 7583 Lowell Harris Rd. Fayetteville, NC

Physical Address, City, and Zip: Cumberland

County: Parcel Identification No (PIN):

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 101 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY: 13a. Yield (gpm) Method of test: 13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES table with columns FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable) table with columns FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop) table with columns FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN table with columns FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT table with columns FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable) table with columns FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary) table with columns FROM, TO, DESCRIPTION

21. REMARKS

22. Certification: Signature of Certified Well Contractor, Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details: You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. LJC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-10

5a. Well Location:

9/18 - 9/19

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled. ONE

9. Total well depth below land surface: 107 (ft.)
For multiple wells list all depths if different (example - 3'@200' and 2'@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
7 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
7 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0401313

List all applicable well construction permits (i.e. LNC, County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-11

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:

(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 107 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger rotary cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
<u>6</u> ft.	<u>0</u> ft.	<u>1</u> in.	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
<u>7</u> ft.	<u>6</u> ft.	<u>1</u> in.	<u>0.01</u>	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
<u>5</u> ft.	<u>4</u> ft.	<u>Bentonite</u>	<u>pour</u>
<u>4</u> ft.	<u>0</u> ft.	<u>Grout</u>	<u>pour</u>
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
<u>7</u> ft.	<u>5</u> ft.	<u>#2 med</u>	<u>pour</u>
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor: [Signature] Date: 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NC AC 02C 0100 or 15A NC AC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. **For All Wells:** Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. **For Injection Wells:** In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolward

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. UIC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-13
9/18 - 9/19

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, NC

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
 (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 11 (ft.)
 For multiple wells list all depths if different (example- 3@200 and 2@100')

10. Static water level below top of casing: _____ (ft.)
 If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
 (i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
11 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
11 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Constructor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolvard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. L/C County, State, Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-19
9/18 - 9/19

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, NC

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
 (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 108 (ft.)
 For multiple wells list all depths if different (example: 3@200 and 2@100')

10. Static water level below top of casing: _____ (ft.)
 If water level is above casing, use _____

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
 (i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
8 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
8 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

Well Contractor Name: T. Bolvard

NC Well Contractor Certification Number: 3307

Company Name: Environmental Drilling & Probing Services, LLC.

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. LJC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

Agricultural Municipal/Public

Geothermal (Heating/Cooling Supply) Residential Water Supply (single)

Industrial/Commercial Residential Water Supply (shared)

Irrigation

Non-Water Supply Well:

Monitoring Recovery

Injection Well:

Aquifer Recharge Groundwater Remediation

Aquifer Storage and Recovery Salinity Barrier

Aquifer Test Stormwater Drainage

Experimental Technology Subsidence Control

Geothermal (Closed Loop) Tracer

Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-14

5a. Well Location: 9/18 - 9/19

Cumberland/Cliffdale Landfill

Facility/Owner Name: _____ Facility ID# (if applicable): _____

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County: _____ Parcel Identification No (PIN): _____

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 1011 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
<u>6</u> ft.	<u>0</u> ft.	<u>1</u> in.	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
<u>11</u> ft.	<u>6</u> ft.	<u>1</u> in.	<u>0.01</u>	<u>Sch. 40</u>	<u>PVC</u>
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
<u>5</u> ft.	<u>4</u> ft.	<u>Bentonite</u>	<u>pour</u>
<u>4</u> ft.	<u>0</u> ft.	<u>Grout</u>	<u>pour</u>
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
<u>11</u> ft.	<u>5</u> ft.	<u># 2 med.</u>	<u>pour</u>
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor: [Signature] Date: 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:
 You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. **For All Wells:** Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. **For Injection Wells:** In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

WM0601313

List all applicable well construction permits (i.e. UIC, County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-21

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 11 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Constructor 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. ETC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# SGP-22

5a. Well Location:

Lumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 108 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Contractor Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohard
Well Contractor Name

3307
NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.
Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. LJC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

Agricultural Municipal/Public

Geothermal (Heating/Cooling Supply) Residential Water Supply (single)

Industrial/Commercial Residential Water Supply (shared)

Irrigation

Non-Water Supply Well:

Monitoring Recovery

Injection Well:

Aquifer Recharge Groundwater Remediation

Aquifer Storage and Recovery Salinity Barrier

Aquifer Test Stormwater Drainage

Experimental Technology Subsidence Control

Geothermal (Closed Loop) Tracer

Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-23
9/18 - 9/19

5a. Well Location: Lumberland / Cliffdale Landfill

Facility/Owner Name: _____ Facility ID# (if applicable): _____
7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip: _____
Comberland

County: _____ Parcel Identification No. (PIN): _____

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)
_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1011 (ft.)
For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES		
FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
11 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT			
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	puvr
4 ft.	0 ft.	Grut	puvr
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)			
FROM	TO	MATERIAL	EMPLACEMENT METHOD
11 ft.	5 ft.	# 2 med	puvr
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)		
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification: _____
Signature of Certified Well Contractor Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. **For All Wells:** Submit this form within 30 days of completion of well construction to the following
Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. **For Injection Wells:** In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. **For Water Supply & Injection Wells:** In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. LJC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# SGP-24

5a. Well Location:

Cumberland/Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 128 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Constructor Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling + Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. L/C County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-27

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 10 (ft.)
For multiple wells list all depths if different (example: 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES					
FROM	TO	DESCRIPTION			
ft.	ft.				
ft.	ft.				
15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
ft.	ft.	in.			
16. INNER CASING OR TUBING (geothermal closed-loop)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
6 ft.	0 ft.	1 in.	Sch. 40	PVC	
ft.	ft.	in.			
17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
10 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			
18. GROUT					
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT		
5 ft.	4 ft.	Bentonite	POUR		
4 ft.	0 ft.	Grout	POUR		
ft.	ft.				
19. SAND/GRAVEL PACK (if applicable)					
FROM	TO	MATERIAL	EMPLACEMENT METHOD		
10 ft.	5 ft.	# 2 med.	POUR		
ft.	ft.				
20. DRILLING LOG (attach additional sheets if necessary)					
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)			
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
21. REMARKS					

22. Certification:

Signature of Certified Well Constructor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following.

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. LSC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# SGP-29

5a. Well Location:

Lumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, NC

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 11 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Contractor Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1636 Mail Service Center, Raleigh, NC 27699-1636

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolvard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #: WM0401313

List all applicable well construction permits (i.e. TIC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-20

5a. Well Location:

9/18 - 9/19

Cumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 10 (ft.)
For multiple wells list all depths if different (example: 3@200 and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES					
FROM	TO	DESCRIPTION			
ft.	ft.				
ft.	ft.				
15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
ft.	ft.	in.			
16. INNER CASING OR TUBING (geothermal closed-loop)					
FROM	TO	DIAMETER	THICKNESS	MATERIAL	
6 ft.	0 ft.	1 in.	Sch. 40	PVC	
ft.	ft.	in.			
17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
10 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			
18. GROUT					
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT		
5 ft.	4 ft.	Bentonite	POUR		
4 ft.	0 ft.	Grout	POUR		
ft.	ft.				
19. SAND/GRAVEL PACK (if applicable)					
FROM	TO	MATERIAL	EMPLACEMENT METHOD		
10 ft.	5 ft.	#2 med.	POUR		
ft.	ft.				
20. DRILLING LOG (attach additional sheets if necessary)					
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)			
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
ft.	ft.				
21. REMARKS					

22. Certification:

Signature of Certified Well Contractor _____ Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

Well Contractor Name: T. Bohyard

Well Contractor Number: 3307

NC Well Contractor Certification Number: Environmental Drilling & Probing Services, LLC.

2. Well Construction Permit #: WM0601313
List all applicable well construction permits if a TIC County State Variance, etc.

3. Well Use (check well use):

- Water Supply Well:**
- Agricultural Municipal/Public
 - Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 - Industrial/Commercial Residential Water Supply (shared)
 - Irrigation

- Non-Water Supply Well:**
- Monitoring Recovery

- Injection Well:**
- Aquifer Recharge Groundwater Remediation
 - Aquifer Storage and Recovery Salinity Barrier
 - Aquifer Test Stormwater Drainage
 - Experimental Technology Subsidence Control
 - Geothermal (Closed Loop) Tracer
 - Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGP-28

5a. Well Location: Cumberland/Cliffdale Landfill

Facility/Owner Name: _____ Facility ID# (if applicable): _____
 Physical Address, City, and Zip: 7583 Lowell Harris Rd. Fayetteville, Nc

County: Cumberland Parcel Identification No. (PIN): _____

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
 If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 108 (ft.)
 For multiple wells list all depths if different (example: 3@200 and 2@100')

10. Static water level below top of casing: _____ (ft.)
 If water level is above casing, use _____

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
 (i.e. auger, rotary cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
6 ft.	0 ft.	1 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
8 ft.	6 ft.	1 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
5 ft.	4 ft.	Bentonite	pour
4 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
8 ft.	5 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification: _____ 9/25/24
 Signature of Certified Well Contractor Date

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details: You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling + Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. LWC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGI-6

5a. Well Location:

Lumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 105 (ft.)
For multiple wells list all depths if different (example: 3@200 and 2@100)

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
4.5 ft.	0 ft.	1/4 in.	tubing	teflon
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
5 ft.	4.5 ft.	1/4 in.	SVP	1/4	S. steel
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
4 ft.	1 ft.	Bentonite	pour
1 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
5 ft.	4 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard
 Well Contractor Name
3307
 NC Well Contractor Certification Number
Environmental Drilling & Probing Services, LLC.
 Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. "JC" County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:	
<input type="checkbox"/> Agricultural	<input type="checkbox"/> Municipal/Public
<input type="checkbox"/> Geothermal (Heating/Cooling Supply)	<input type="checkbox"/> Residential Water Supply (single)
<input type="checkbox"/> Industrial/Commercial	<input type="checkbox"/> Residential Water Supply (shared)
<input type="checkbox"/> Irrigation	
Non-Water Supply Well:	
<input checked="" type="checkbox"/> Monitoring	<input type="checkbox"/> Recovery
Injection Well:	
<input type="checkbox"/> Aquifer Recharge	<input type="checkbox"/> Groundwater Remediation
<input type="checkbox"/> Aquifer Storage and Recovery	<input type="checkbox"/> Salinity Barrier
<input type="checkbox"/> Aquifer Test	<input type="checkbox"/> Stormwater Drainage
<input type="checkbox"/> Experimental Technology	<input type="checkbox"/> Subsidence Control
<input type="checkbox"/> Geothermal (Closed Loop)	<input type="checkbox"/> Tracer
<input type="checkbox"/> Geothermal (Heating/Cooling Return)	<input type="checkbox"/> Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGI-12
9/18 - 9/19

5a. Well Location:
Cumberland / Cliffdale Landfill
 Facility/Owner Name Facility ID# (if applicable)
7583 Lowell Harris Rd. Fayetteville, Nc
 Physical Address, City, and Zip
Cumberland
 County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
 (if well field, one lat/long is sufficient)
 _____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled: ONE

9. Total well depth below land surface: 104 (ft.)
For multiple wells list all depths if different (example - 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES		
FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)				
FROM	TO	DIAMETER	THICKNESS	MATERIAL
3.5 ft.	0 ft.	1/4 in.	Tubing	Teflon
ft.	ft.	in.		

17. SCREEN					
FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
4 ft.	3.5 ft.	1/4 in.	SVP	1/4	S. Steel
ft.	ft.	in.			

18. GROUT			
FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
4 ft.	1 ft.	Bentonite	pour
1 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)			
FROM	TO	MATERIAL	EMPLACEMENT METHOD
4 ft.	3 ft.	# 2 med	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)		
FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:
 Signature of Certified Well Constructor: [Signature] Date: 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

23. Site diagram or additional well details:
 You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling + Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. 131C County State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SG-I-18
9/18 - 9/19

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 104 (ft.)
For multiple wells list all depths if different (example: 3 @ 200 and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
3.5 ft.	0 ft.	1/4 in.	Tubing	Teflon
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
4 ft.	3.5 ft.	1/4 in.	SVP	1/4	S. Steel
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
3 ft.	1 ft.	Bentonite	pour
1 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
4 ft.	3 ft.	# 2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. TIC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agncultural, Municipal/Public, Geothermal (Heating/Cooling Supply), Residential Water Supply (single), Industrial/Commercial, Residential Water Supply (shared), Irrigation

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Groundwater Remediation, Aquifer Storage and Recovery, Salinity Barrier, Aquifer Test, Stormwater Drainage, Experimental Technology, Subsidence Control, Geothermal (Closed Loop), Tracer, Geothermal (Heating/Cooling Return), Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGI-25

5a. Well Location:

Cumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 104 (ft.)

For multiple wells list all depths if different (example - 3@200' and 2@100')

10. Static water level below top of casing: (ft.)

If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION. Rows for water zones.

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL.

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL. Includes entry for 3.5 ft to 0 ft, 1/4 in, Tubing, Teflon.

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL. Includes entry for 4 ft to 3.5 ft, 1/4 in, SVP, 1/4, S. steel.

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT. Includes entries for Bentonite and Grout.

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD. Includes entry for #2 med. sand/gravel.

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Constructor and Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. TIC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# SGI-26

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 125 (ft.)
For multiple wells list all depths if different (example: 3@200' and 2@100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 6 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
4.5 ft.	0 ft.	1/4 in.	Tubing	Teflon
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
5 ft.	4.5 ft.	1/4 in.	5VP	1/4	S. Steel
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
4 ft.	1 ft.	Bentinite	pour
1 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
5 ft.	4 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolvard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0401313

List all applicable well construction permits (i.e. 17C County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-1

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 38.5 (ft.)
For multiple wells list all depths if different (example: 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
28.5 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
38.5 ft.	28.5 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
26.5 ft.	24.5 ft.	Bentonite	PAVR
24.5 ft.	0 ft.	Grout	PAVR
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
38.5 ft.	26.5 ft.	# 2 Med.	PAVR
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313

List all applicable well construction permits (i.e. UIC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-2

5a. Well Location:

9/18 - 9/19

Cumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 30 (ft.)
For multiple wells list all depths if different (example: 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
20 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
30 ft.	20 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
18 ft.	16 ft.	Bentonite	pour
16 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
30 ft.	18 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed.

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolvard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. TJC County State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-3

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is (are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form.

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 15 (ft.)
For multiple wells list all depths if different (example - 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____
 13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
5 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
15 ft.	5 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
3 ft.	2 ft.	Bentonite	pour
2 ft.	0 ft.	Grout	pour
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
15 ft.	3 ft.	#2 med.	pour
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor: [Signature] Date: 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #:

WM0401313

List all applicable well construction permits (i.e. L/C County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agncultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# MW-4

5a. Well Location:

Cumberland/Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, NC

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 27 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES, 15. OUTER CASING, 16. INNER CASING OR TUBING, 17. SCREEN, 18. GROUT, 19. SAND/GRAVEL PACK, 20. DRILLING LOG, 21. REMARKS

22. Certification:

Signature of Certified Well Contractor 9/25/24 Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard
Well Contractor Name

3307
NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.
Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. LJC County State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:
Agricultural, Geothermal, Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single/shared), Non-Water Supply Well: Monitoring, Recovery, Injection Well: Aquifer Recharge, Storage and Recovery, Test, Experimental Technology, Geothermal (Closed Loop/Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other.

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-5
5a. Well Location: 9/18 - 9/19

Cumberland / Cliffdale Landfill
Facility/Owner Name
7583 Lowell Harris Rd. Fayetteville, Nc
Physical Address, City, and Zip
Cumberland
County Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 27 (ft.)

10. Static water level below top of casing: (ft.)

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA

FOR WATER SUPPLY WELLS ONLY:
13a. Yield (gpm) Method of test:
13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES
Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)
Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)
Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN
Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT
Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)
Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)
Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:
Signature of Certified Well Constructor
Date 9/25/24

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. LJC County State Variance etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural, Geothermal (Heating/Cooling Supply), Industrial/Commercial, Irrigation, Municipal/Public, Residential Water Supply (single), Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring, Recovery

Injection Well:

- Aquifer Recharge, Aquifer Storage and Recovery, Aquifer Test, Experimental Technology, Geothermal (Closed Loop), Geothermal (Heating/Cooling Return), Groundwater Remediation, Salinity Barrier, Stormwater Drainage, Subsidence Control, Tracer, Other (explain under #21 Remarks)

4. Date Well(s) Completed:

9/10 - 9/13 Well ID# MW-6

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

N W

6. Is (are) the well(s) Permanent or Temporary

Permanent

7. Is this a repair to an existing well: Yes or No

No

If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed Indicate TOTAL NUMBER of wells drilled

ONE

9. Total well depth below land surface:

1 @ 25 (ft.)

For multiple wells list all depths if different (example: 3 @ 200' and 2 @ 100')

10. Static water level below top of casing:

If water level is above casing, use

11. Borehole diameter:

8 (in.)

12. Well construction method:

HSA

(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) Method of test:

13b. Disinfection type: Amount:

For Internal Use Only:

14. WATER ZONES

Table with columns: FROM, TO, DESCRIPTION

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

16. INNER CASING OR TUBING (geothermal closed-loop)

Table with columns: FROM, TO, DIAMETER, THICKNESS, MATERIAL

17. SCREEN

Table with columns: FROM, TO, DIAMETER, SLOT SIZE, THICKNESS, MATERIAL

18. GROUT

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD & AMOUNT

19. SAND/GRAVEL PACK (if applicable)

Table with columns: FROM, TO, MATERIAL, EMPLACEMENT METHOD

20. DRILLING LOG (attach additional sheets if necessary)

Table with columns: FROM, TO, DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)

21. REMARKS

22. Certification:

Signature of Certified Well Contractor 9/25/24 Date

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit, 1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program, 1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohyard

Well Contractor Name
3307

NC Well Contractor Certification Number
Environmental Drilling & Probing Services, LLC.

Company Name
WM0601313

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. EIC County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:
 Agricultural Municipal/Public
 Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
 Industrial/Commercial Residential Water Supply (shared)
 Irrigation

Non-Water Supply Well:
 Monitoring Recovery

Injection Well:
 Aquifer Recharge Groundwater Remediation
 Aquifer Storage and Recovery Salinity Barrier
 Aquifer Test Stormwater Drainage
 Experimental Technology Subsidence Control
 Geothermal (Closed Loop) Tracer
 Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-7
9/18 - 9/19

5a. Well Location:
Cumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)
7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip
Cumberland

County Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 14 (ft.)
For multiple wells list all depths if different (example: 3 @ 200 and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:
 13a. Yield (gpm) _____ Method of test: _____
 13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
4 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
14 ft.	4 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
3 ft.	2 ft.	Bentonite	POVR
2 ft.	0 ft.	Grout	POVR
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
14 ft.	3 ft.	#2 med.	POVR
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:
 Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bohard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #:

WM0601313

List all applicable well construction permits (i.e. LJC County State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural Municipal/Public
- Geothermal (Heating/Cooling Supply) Residential Water Supply (single)
- Industrial/Commercial Residential Water Supply (shared)
- Irrigation

Non-Water Supply Well:

- Monitoring Recovery

Injection Well:

- Aquifer Recharge Groundwater Remediation
- Aquifer Storage and Recovery Salinity Barrier
- Aquifer Test Stormwater Drainage
- Experimental Technology Subsidence Control
- Geothermal (Closed Loop) Tracer
- Geothermal (Heating/Cooling Return) Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10-9/13 Well ID# MW-8

5a. Well Location:

9/18-9/19

Lumberland/Cliffdale Landfill

Facility/Owner Name

Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees: (if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s) Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 14 (ft.)
For multiple wells list all depths if different (example: 3 @ 200' and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger, rotary, cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
4 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
14 ft.	4 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
3 ft.	2 ft.	Bentonite	PAUL
2 ft.	0 ft.	GROUT	PAUL
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
14 ft.	3 ft.	# 2 med.	PAUL
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

Signature of Certified Well Contractor [Signature] Date 9/25/24

By signing this form I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION RECORD (GW-1)

1. Well Contractor Information:

T. Bolyard

Well Contractor Name

3307

NC Well Contractor Certification Number

Environmental Drilling & Probing Services, LLC.

Company Name

2. Well Construction Permit #: WM0601313
List all applicable well construction permits (i.e. L/C, County, State Variance, etc.)

3. Well Use (check well use):

Water Supply Well:

- Agricultural
- Geothermal (Heating/Cooling Supply)
- Industrial/Commercial
- Irrigation
- Municipal/Public
- Residential Water Supply (single)
- Residential Water Supply (shared)

Non-Water Supply Well:

- Monitoring
- Recovery

Injection Well:

- Aquifer Recharge
- Aquifer Storage and Recovery
- Aquifer Test
- Experimental Technology
- Geothermal (Closed Loop)
- Geothermal (Heating/Cooling Return)
- Groundwater Remediation
- Salinity Barrier
- Stormwater Drainage
- Subsidence Control
- Tracer
- Other (explain under #21 Remarks)

4. Date Well(s) Completed: 9/10 - 9/13 Well ID# MW-9
9/18 - 9/19

5a. Well Location:

Cumberland / Cliffdale Landfill

Facility/Owner Name Facility ID# (if applicable)

7583 Lowell Harris Rd. Fayetteville, Nc

Physical Address, City, and Zip

Cumberland

County

Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

6. Is(are) the well(s): Permanent or Temporary

7. Is this a repair to an existing well: Yes or No
If this is a repair fill out known well construction information and explain the nature of the repair under #21 remarks section or on the back of this form

8. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same construction, only 1 GW-1 is needed. Indicate TOTAL NUMBER of wells drilled ONE

9. Total well depth below land surface: 1 @ 27 (ft.)
For multiple wells list all depths if different (example: 3 @ 200 and 2 @ 100')

10. Static water level below top of casing: _____ (ft.)
If water level is above casing, use

11. Borehole diameter: 8 (in.)

12. Well construction method: HSA
(i.e. auger rotary cable, direct push, etc.)

FOR WATER SUPPLY WELLS ONLY:

13a. Yield (gpm) _____ Method of test: _____

13b. Disinfection type: _____ Amount: _____

For Internal Use Only:

14. WATER ZONES

FROM	TO	DESCRIPTION
ft.	ft.	
ft.	ft.	

15. OUTER CASING (for multi-cased wells) OR LINER (if applicable)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
ft.	ft.	in.		

16. INNER CASING OR TUBING (geothermal closed-loop)

FROM	TO	DIAMETER	THICKNESS	MATERIAL
17 ft.	0 ft.	2 in.	Sch. 40	PVC
ft.	ft.	in.		

17. SCREEN

FROM	TO	DIAMETER	SLOT SIZE	THICKNESS	MATERIAL
27 ft.	17 ft.	2 in.	0.01	Sch. 40	PVC
ft.	ft.	in.			

18. GROUT

FROM	TO	MATERIAL	EMPLACEMENT METHOD & AMOUNT
15 ft.	13 ft.	Bentonite	POUR
13 ft.	0 ft.	Grout	POUR
ft.	ft.		

19. SAND/GRAVEL PACK (if applicable)

FROM	TO	MATERIAL	EMPLACEMENT METHOD
27 ft.	15 ft.	# 2 med.	POUR
ft.	ft.		

20. DRILLING LOG (attach additional sheets if necessary)

FROM	TO	DESCRIPTION (color, hardness, soil/rock type, grain size, etc.)
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	
ft.	ft.	

21. REMARKS

22. Certification:

[Signature] 9/25/24
Signature of Certified Well Contractor Date

By signing this form, I hereby certify that the well(s) was (were) constructed in accordance with 15A NCAC 02C 0100 or 15A NCAC 02C 0200 Well Construction Standards and that a copy of this record has been provided to the well owner

23. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well construction details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

24a. For All Wells: Submit this form within 30 days of completion of well construction to the following

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

24b. For Injection Wells: In addition to sending the form to the address in 24a above, also submit one copy of this form within 30 days of completion of well construction to the following

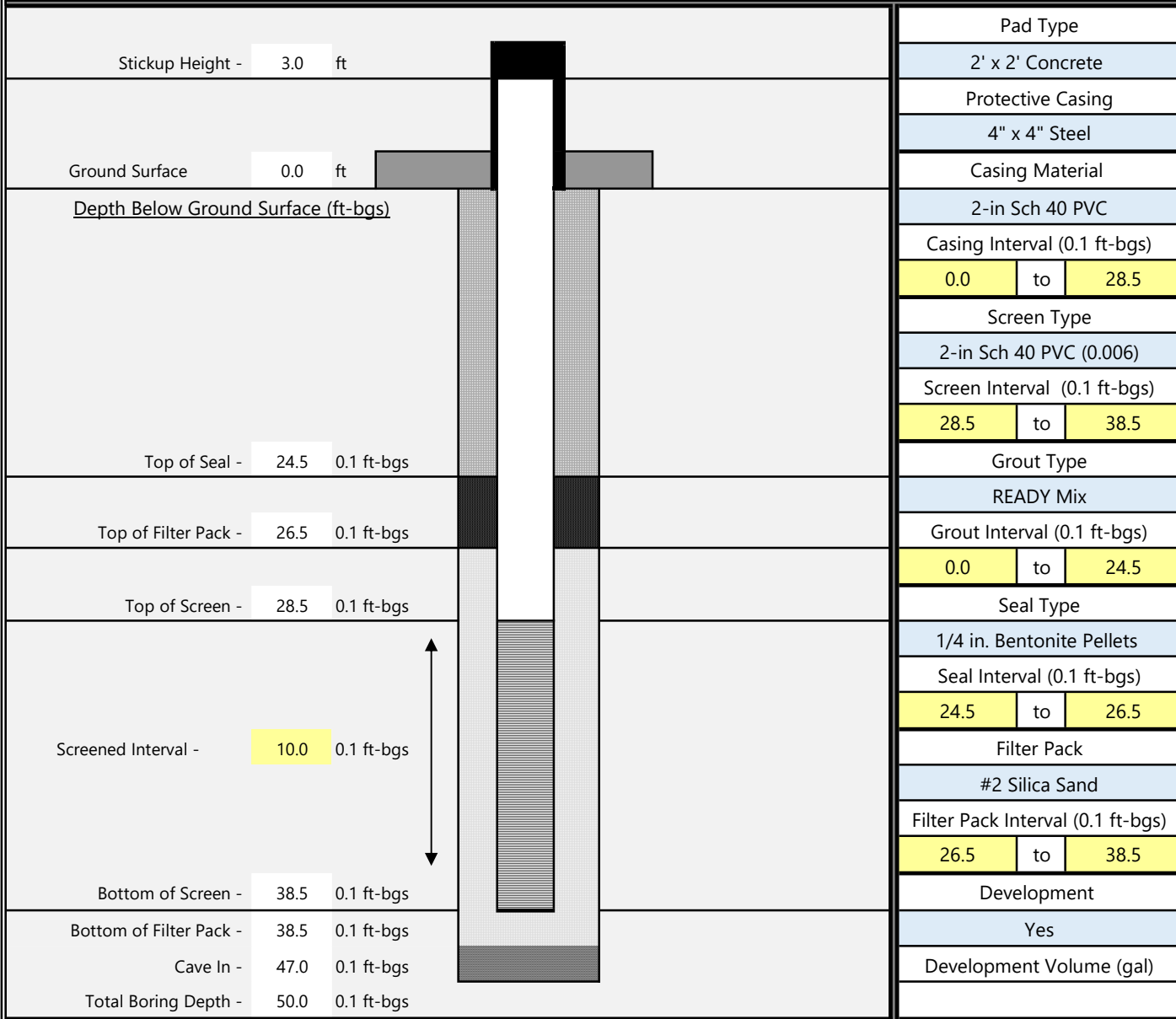
Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

24c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well construction to the county health department of the county where constructed

WELL CONSTRUCTION DETAIL



Well ID	Project Name	Project Number		
MW-1	2900RI-5-8 Cliffdale Landfill	23050459		
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/10/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
33.56	10/1/2024.		38.5	8



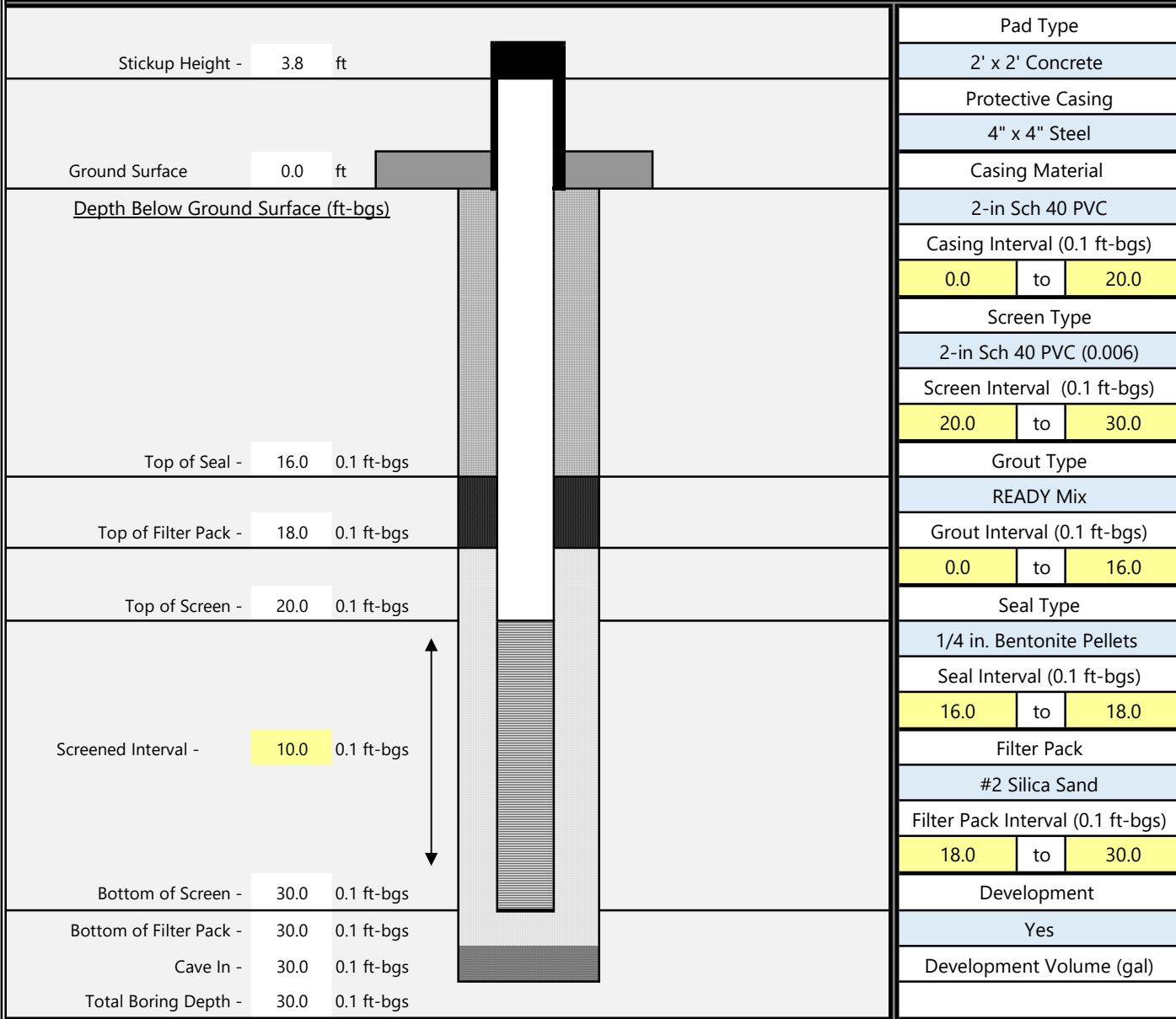
Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name	Project Number		
MW-2	2900RI-5-8 Cliffdale Landfill	23050459		
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/11/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
33.52	10/1/2024.		30.0	8



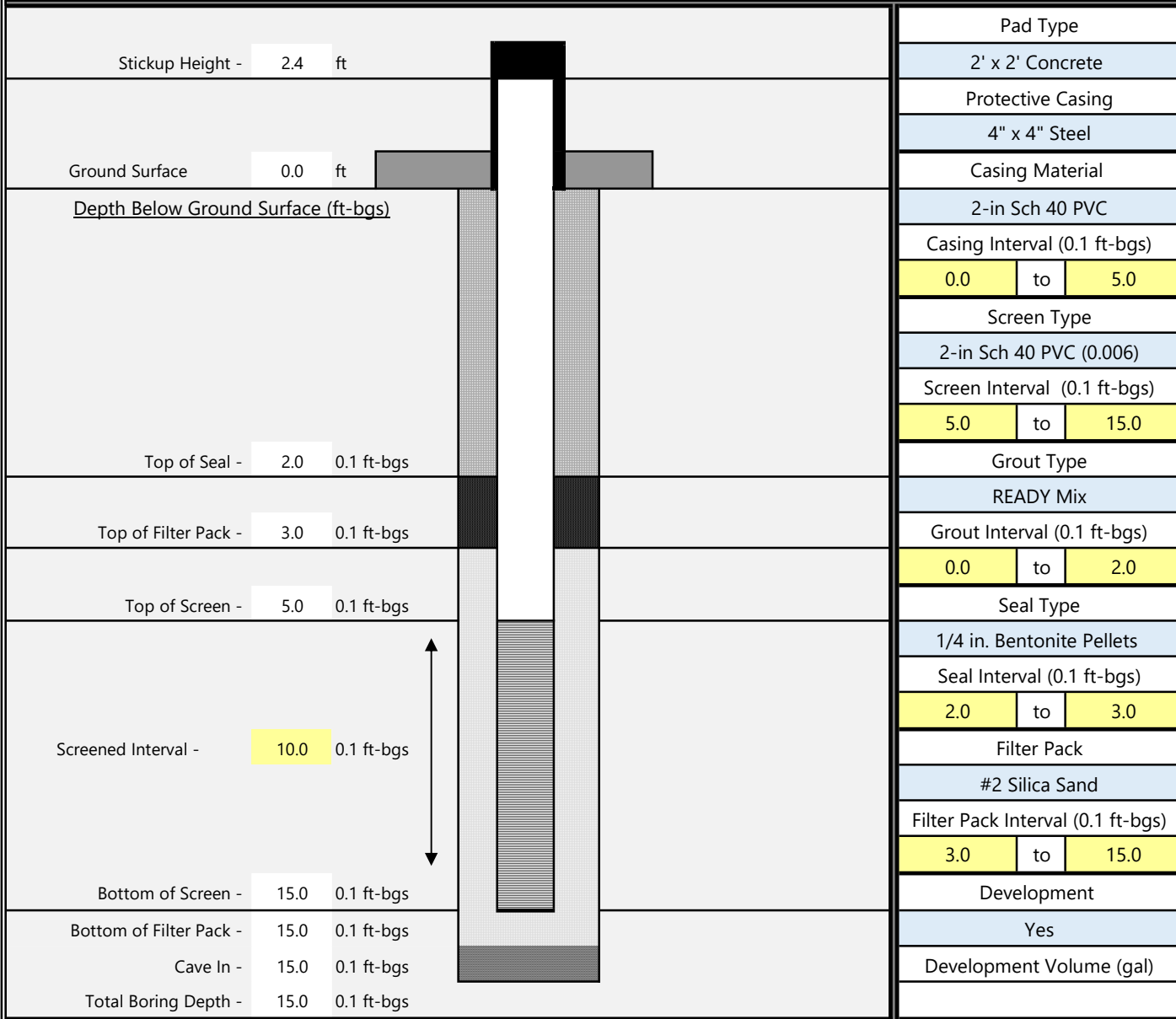
Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name		Project Number	
MW-3	2900RI-5-8 Cliffdale Landfill		23050459	
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/11/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
14.24	10/1/2024.		15.0	8 in



Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name		Project Number	
MW-4	2900RI-5-8 Cliffdale Landfill		23050459	
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
29.87	10/1/2024.		27.0	8

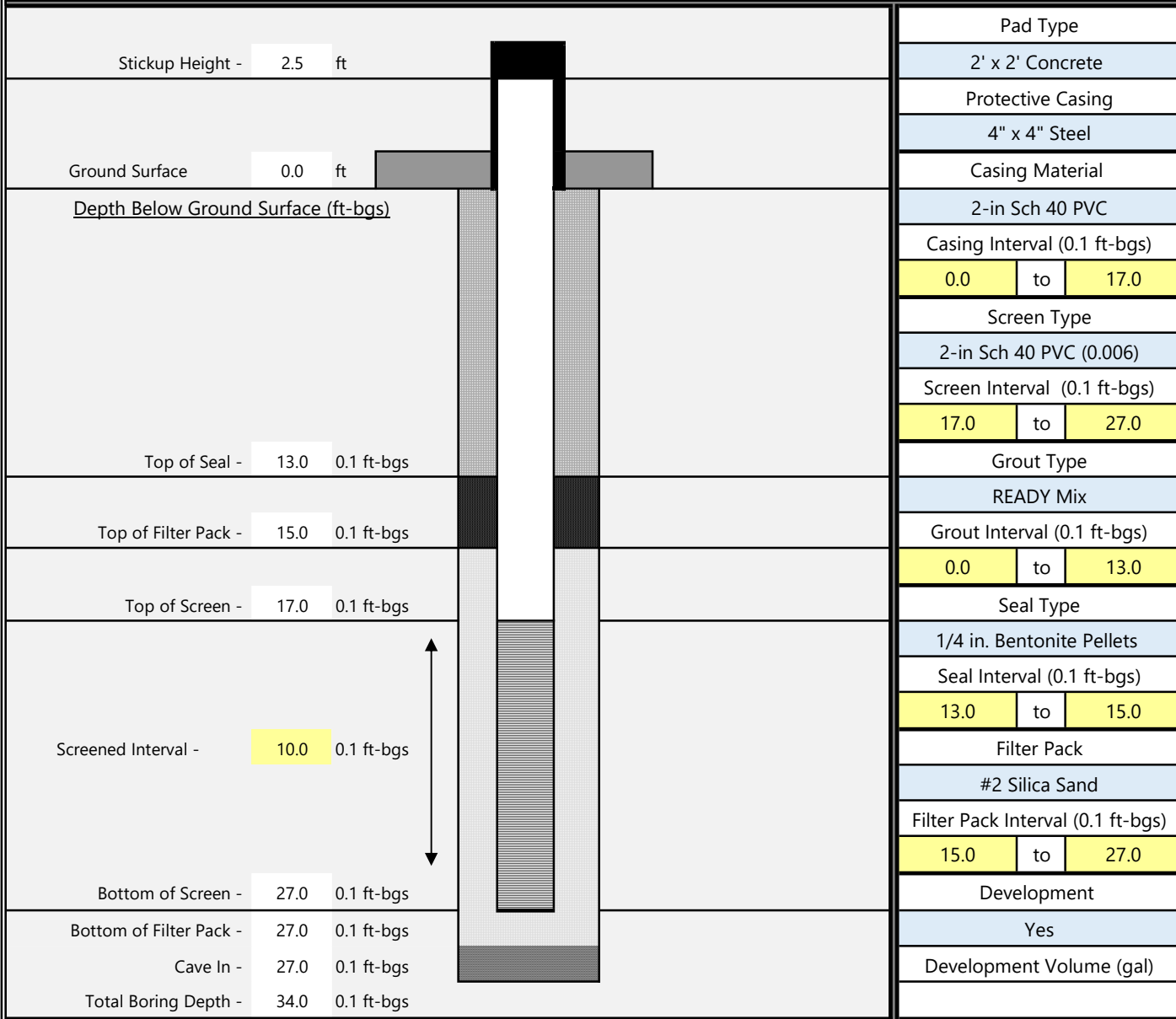
<p>Stickup Height - 3.0 ft</p> <p>Ground Surface 0.0 ft</p> <p><u>Depth Below Ground Surface (ft-bgs)</u></p> <p>Top of Seal - 13.0 0.1 ft-bgs</p> <p>Top of Filter Pack - 15.0 0.1 ft-bgs</p> <p>Top of Screen - 17.0 0.1 ft-bgs</p> <p>Screened Interval - 10.0 0.1 ft-bgs</p> <p>Bottom of Screen - 27.0 0.1 ft-bgs</p> <p>Bottom of Filter Pack - 27.0 0.1 ft-bgs</p> <p>Cave In - 27.0 0.1 ft-bgs</p> <p>Total Boring Depth - 27.0 0.1 ft-bgs</p>	<p>Pad Type</p> <p>2' x 2' Concrete</p> <p>Protective Casing</p> <p>4" x 4" Steel</p> <p>Casing Material</p> <p>2-in Sch 40 PVC</p> <p>Casing Interval (0.1 ft-bgs)</p> <p style="text-align: center;">0.0 to 17.0</p> <p>Screen Type</p> <p>2-in Sch 40 PVC (0.006)</p> <p>Screen Interval (0.1 ft-bgs)</p> <p style="text-align: center;">17.0 to 27.0</p> <p>Grout Type</p> <p>READY Mix</p> <p>Grout Interval (0.1 ft-bgs)</p> <p style="text-align: center;">0.0 to 13.0</p> <p>Seal Type</p> <p>1/4 in. Bentonite Pellets</p> <p>Seal Interval (0.1 ft-bgs)</p> <p style="text-align: center;">13.0 to 15.0</p> <p>Filter Pack</p> <p>#2 Silica Sand</p> <p>Filter Pack Interval (0.1 ft-bgs)</p> <p style="text-align: center;">15.0 to 27.0</p> <p>Development</p> <p>Yes</p> <p>Development Volume (gal)</p>
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Notes:	BTOC - Below Top of Casing TBD - To Be Determined For lithologic information see attached boring log
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WELL CONSTRUCTION DETAIL



Well ID	Project Name		Project Number	
MW-5	2900RI-5-8 Cliffdale Landfill		23050459	
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
23.88	10/1/2024.		27.0	8



Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name		Project Number	
MW-6	2900RI-5-8 Cliffdale Landfill		23050459	
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
23.21	10/1/2024.		25.0	8

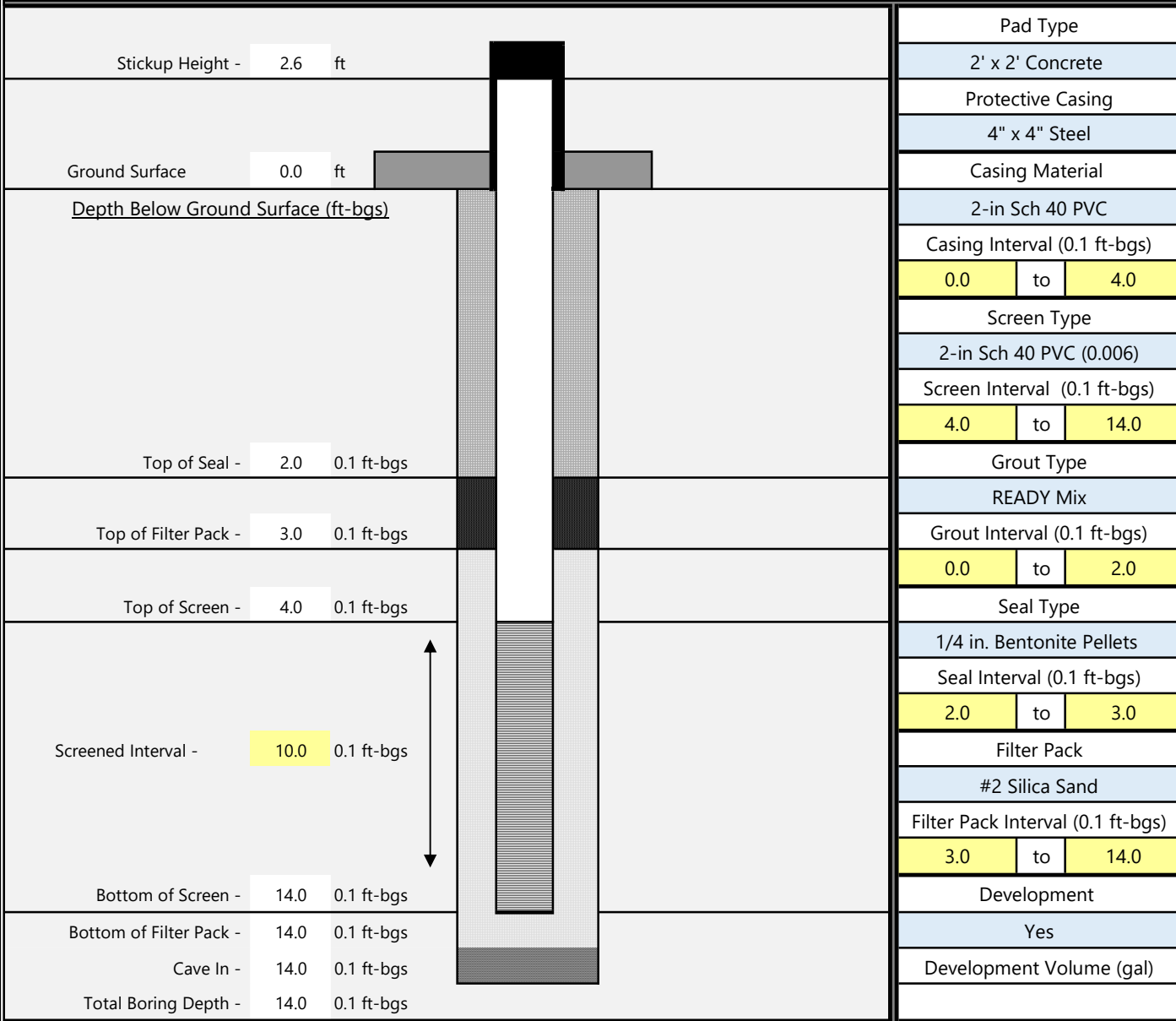
<p>Stickup Height - 3.5 ft</p> <p>Ground Surface 0.0 ft</p> <p><u>Depth Below Ground Surface (ft-bgs)</u></p> <p>Top of Seal - 11.0 0.1 ft-bgs</p> <p>Top of Filter Pack - 13.0 0.1 ft-bgs</p> <p>Top of Screen - 15.0 0.1 ft-bgs</p> <p>Screened Interval - 10.0 0.1 ft-bgs</p> <p>Bottom of Screen - 25.0 0.1 ft-bgs</p> <p>Bottom of Filter Pack - 25.0 0.1 ft-bgs</p> <p>Cave In - 25.0 0.1 ft-bgs</p> <p>Total Boring Depth - 25.0 0.1 ft-bgs</p>	<p>Pad Type</p> <p>2' x 2' Concrete</p> <p>Protective Casing</p> <p>4" x 4" Steel</p> <p>Casing Material</p> <p>2-in Sch 40 PVC</p> <p>Casing Interval (0.1 ft-bgs)</p> <p style="text-align: center;">0.0 to 15.0</p> <p>Screen Type</p> <p>2-in Sch 40 PVC (0.006)</p> <p>Screen Interval (0.1 ft-bgs)</p> <p style="text-align: center;">15.0 to 25.0</p> <p>Grout Type</p> <p>READY Mix</p> <p>Grout Interval (0.1 ft-bgs)</p> <p style="text-align: center;">0.0 to 11.0</p> <p>Seal Type</p> <p>1/4 in. Bentonite Pellets</p> <p>Seal Interval (0.1 ft-bgs)</p> <p style="text-align: center;">11.0 to 13.0</p> <p>Filter Pack</p> <p>#2 Silica Sand</p> <p>Filter Pack Interval (0.1 ft-bgs)</p> <p style="text-align: center;">13.0 to 25.0</p> <p>Development</p> <p>Yes</p> <p>Development Volume (gal)</p>
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Notes:	BTOC - Below Top of Casing TBD - To Be Determined For lithologic information see attached boring log
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WELL CONSTRUCTION DETAIL



Well ID	Project Name	Project Number		
MW-7	2900RI-5-8 Cliffdale Landfill	23050459		
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
10.60	10/1/2024.		14.0	8



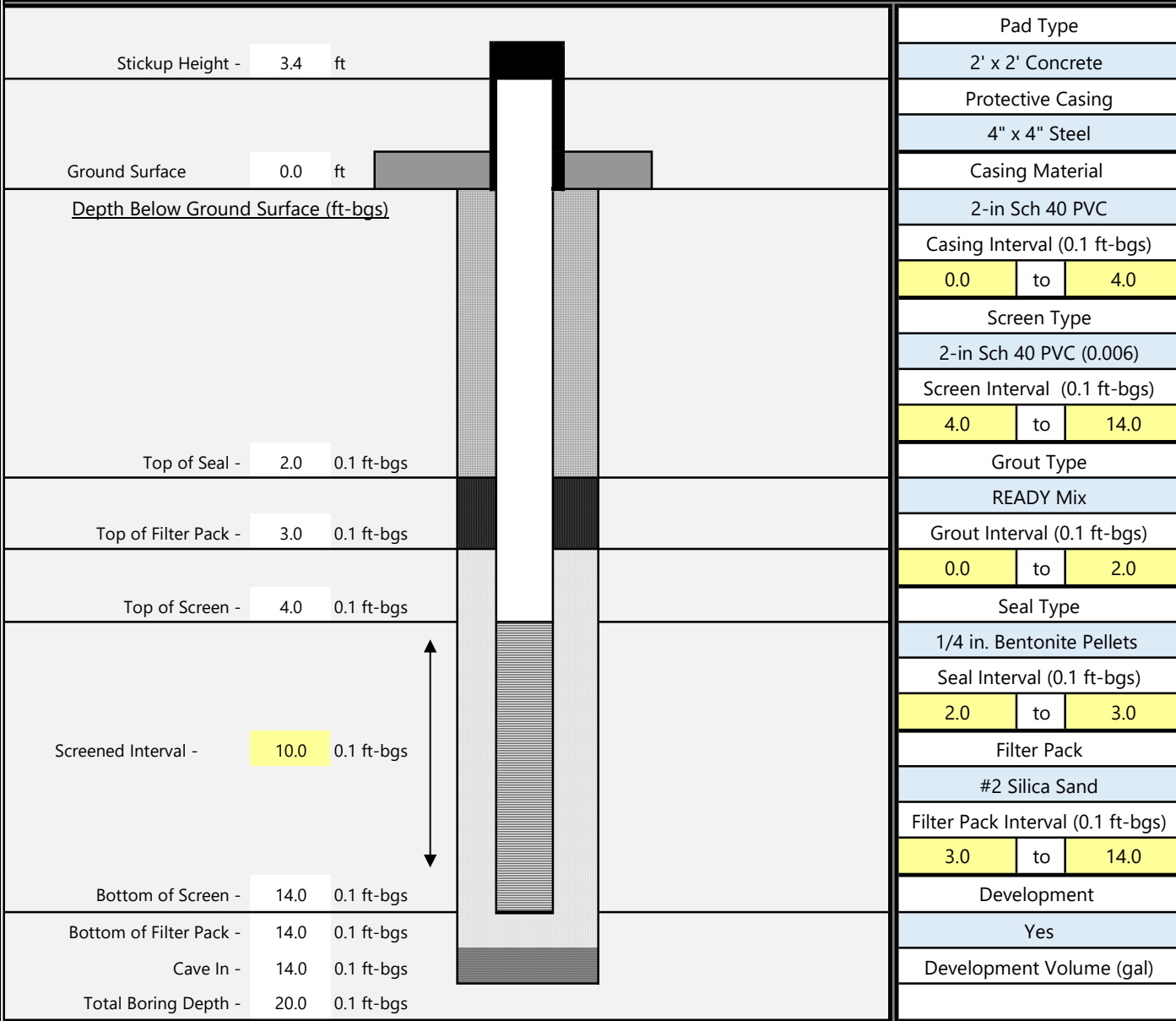
Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name	Project Number		
MW-8	2900RI-5-8 Cliffdale Landfill	23050459		
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
12.68	10/1/2024.		14.0	8



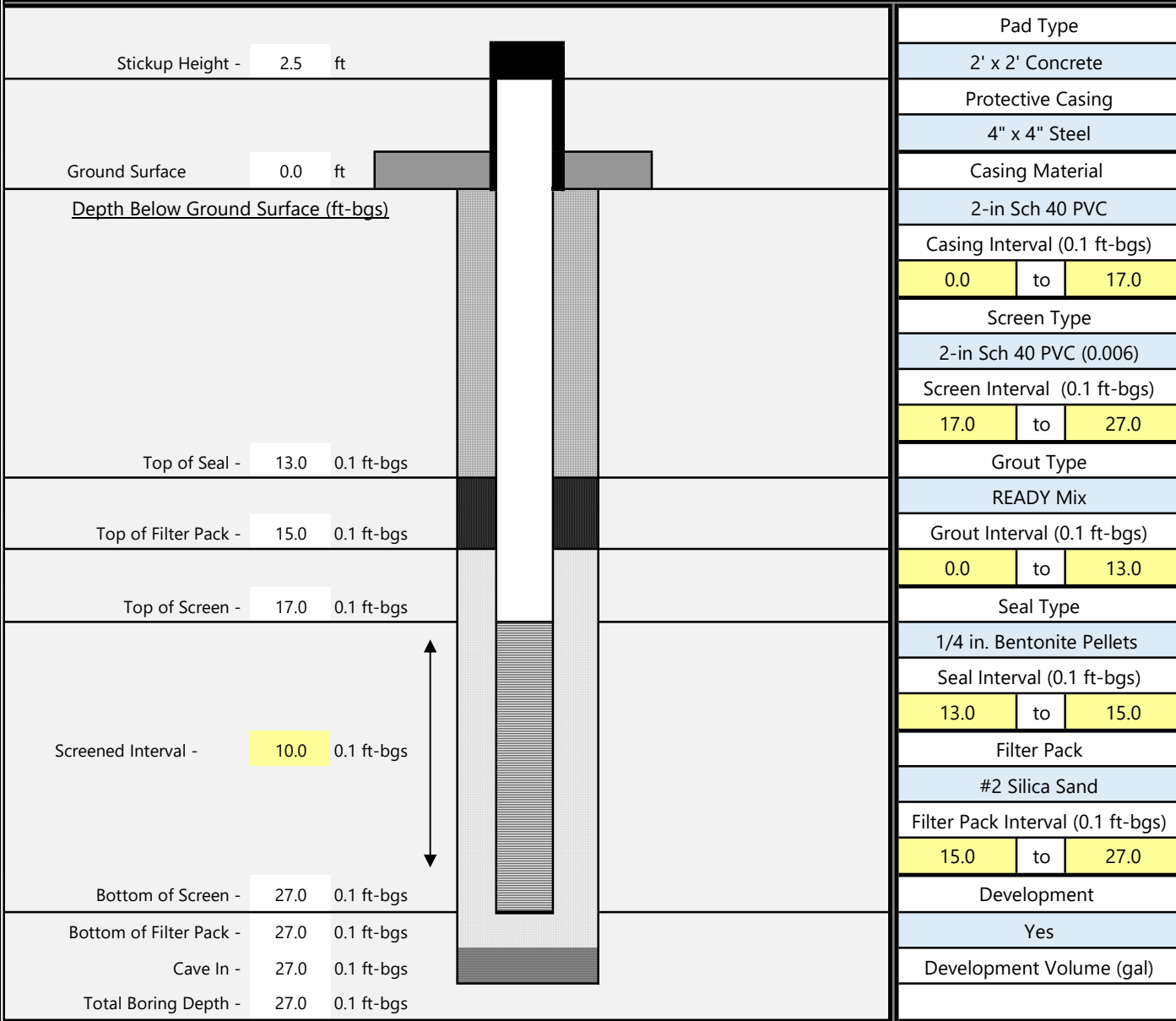
Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

WELL CONSTRUCTION DETAIL



Well ID	Project Name		Project Number	
MW-9	2900RI-5-8 Cliffdale Landfill		23050459	
S&ME Staff	Installation Date	County	City	Well Permit Number
Connor Hicks	9/18/2024	Cumberland	Fayetteville	WM061313
Drilling Contractor		License Number	Drill Rig	Well Type / Use
EDPS		3307	7822DT Genuine Geoprobe	Stickup Monitor Well
Water Level at TOB (0.01 ft- BTOC)	Date/Time	Northing (0.1 ft)	Land Surface Elev. (0.01 ft)	Drilling Method
				Hollow Stem Auger
Depth to Water (0.01 ft- BTOC)	Date/Time	Easting (0.1 ft)	Total Well Depth (0.1 ft-bgs)	Borehole Diameter (1 in)
7.61	10/1/2024.		27.0	8



Notes:

BTOC - Below Top of Casing
 TBD - To Be Determined
 For lithologic information see attached boring log

Appendix III– Field Notes

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill			Date:	9/24/2024
Project Number:	23050459 RI-7			Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC			Calibration Date:	9/23/2024
Weather:	Overcast				
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444				

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-1	SGP-2	SGP-3	SGP-4	SGP-5
Canister ID	6L1296	6L1538	6L1632	6L0832	6L0658
Regulator ID	23793	24406	23578	23618	24143
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	74	78	80	81	81
Barometric Pressure (inHg)	30.0	30.0	30.0	30.0	30.0

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	17.2	15.1	15	15	15.7
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0	0	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes	Yes	Yes

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	10	0	72	10	0	72	10	0	72	7	0	72	10	0	72	
Volume (mL)	1543			1543			1543			1530			1543			
Purge Flow Rate (mL/min)	200			200			200			200			200			
Purge Interval (3x Vol.) (min)	23.1			23.1			23.1			22.9			23.1			
Actual Purge Time (min)	25.0			25.0			25.0			25.0			25.0			

Sample Collection					
Start Time	10:50	11:25	12:00	12:30	13:15
Initial Vacuum (inHg)	30	28	29	29	30
End Time	15:00	14:25	15:20	15:40	16:10
Final Vacuum (inHg)	7	7	3	5	5
Approximate Total Time (min)	250	180	200	190	175
Sample Analysis	VOCs by TO-15		VOCs by TO-15		VOCs by TO-15

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/24/2024

- Notes:**
- Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 - Duplicate is taken at SGP-3.

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill	Date:	9/24/2024
Project Number:	23050459 RI-7	Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC	Calibration Date:	9/23/2024
Weather:	Overcast		
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444		

Sample Information				
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	
Sample ID	SGI-6	SGP-7	Duplicate-1	
Canister ID	6L3748	6L0316	6L1590	
Regulator ID	23996	23106	24884	
Canister Volume (L)	6	6	6	
Ambient Temp (°F)	82	82	80	
Barometric Pressure (inHg)	30.0	30.0	30.0	

Leak Test Information				
Purge Method	Personal Pump	Personal Pump	Personal Pump	
He Concentration in Shroud (%)	18.2	16.2	15	
He Detected in Leak Test (Y or N)	No	No	No	
He Conc. Detected in Leak Test (ppm)	0	0	0	
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes	

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	48	to	60	60	to	132	60	to	132		to			to		
Volume (mL)	281			1530			1543									
Purge Flow Rate (mL/min)	200			200			200									
Purge Interval (3x Vol.) (min)	4.2			22.9			23.1									
Actual Purge Time (min)	5.0			25.0			25.0									

Sample Collection				
Start Time	13:30	14:10	12:00	
Initial Vacuum (inHg)	30	30	28	
End Time	16:20	16:30	12:55	
Final Vacuum (inHg)	6	7	3	
Approximate Total Time (min)	170	140	55	
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/24/2024

- Notes:**
1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 2. Duplicate is taken at SGP-3.

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill	Date:	9/25/2024
Project Number:	23050459 RI-7	Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC	Calibration Date:	9/23/2024
Weather:	Sunny		
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444		

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-8	SGP-9	SGP-10	SGP-11	SGI-12
Canister ID	6L0502	6L1357	6L2346	6L0886	6L1147
Regulator ID	23971	23505	26251	24704	23356
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	77	78	82	81	80
Barometric Pressure (inHg)	30.0	30.0	30.0	30.0	30.0

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	19.4	18.3	15.3	17.5	19
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0	0	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes	Yes	Yes

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	60	to	96	60	to	132	60	to	84	60	to	84	36	to	48	
Volume (mL)	781			1543			531			531			272			
Purge Flow Rate (mL/min)	200			200			200			200			200			
Purge Interval (3x Vol.) (min)	11.7			23.1			8.0			8.0			4.1			
Actual Purge Time (min)	15.0			25.0			10.0			10.0			5.0			

Sample Collection					
Start Time	09:45	10:20	12:35	12:00	11:15
Initial Vacuum (inHg)	28	30	29	30	30
End Time	12:10	13:10	15:15	14:20	14:25
Final Vacuum (inHg)	5	6	5	3	5
Approximate Total Time (min)	145	170	160	140	190
Sample Analysis	VOCs by TO-15		VOCs by TO-15		VOCs by TO-15

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/25/2024

- Notes:**
- Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 - Duplicate-2 is taken at SGP-11.

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill			Date:	9/24/2024
Project Number:	23050459 RI-7			Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC			Calibration Date:	9/23/2024
Weather:	Overcast				
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444				

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant		
Sample ID	SGP-13	SGP-14	Duplicate-2		
Canister ID	6L1577	6L0135	6L0387		
Regulator ID	24316	23268	23755		
Canister Volume (L)	6	6	6		
Ambient Temp (°F)	79	83	81		
Barometric Pressure (inHg)	30.0	30.0	30.0		

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump		
He Concentration in Shroud (%)	16.3	15.7	17.5		
He Detected in Leak Test (Y or N)	No	No	No		
He Conc. Detected in Leak Test (ppm)	0	0	0		
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%		
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes		

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	132	60	to	84		to			to		
Volume (mL)	1543			1543			531									
Purge Flow Rate (mL/min)	200			200			200									
Purge Interval (3x Vol.) (min)	23.1			23.1			8.0									
Actual Purge Time (min)	25.0			25.0			10.0									

Sample Collection					
Start Time	10:55	13:15	12:00		
Initial Vacuum (inHg)	30	30	27		
End Time	13:40	15:40	15:05		
Final Vacuum (inHg)	6	6	7		
Approximate Total Time (min)	165	145	185		
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15		

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/25/2024

- Notes:**
1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 2. Duplicate-2 is taken at SGP-11.

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill	Date:	9/26/2024
Project Number:	23050459 RI-7	Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC	Calibration Date:	9/23/2024
Weather:	Sunny		
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444		

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGI-18	SGP-19	SGP-20	Duplicate-3	SGP-27
Canister ID	6L2486	6L0856	6L0818	6L1572	6L0745
Regulator ID	23451	24746	26258	24142	24047
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	77	77	77	77	78
Barometric Pressure (inHg)	29.8	29.8	29.8	29.8	29.7

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	18.1	17.3	15	15	16
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0	0	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes	Yes	Yes

Purge Information																
Enter Construction Details	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
→	4	0	12	6	0	24	7	0	24	7	0	24	8	0	60	
Sand Pack Interval Depth (in-bgs)	36	to	48	60	to	84	60	to	84	60	to	84	60	to	120	
Volume (mL)	268			526			531			531			1285			
Purge Flow Rate (mL/min)	200			200			200			200			200			
Purge Interval (3x Vol.) (min)	4.0			7.9			8.0			8.0			19.3			
Actual Purge Time (min)	15.0			20.0			20.0			20.0			20.0			

Sample Collection					
Start Time	10:00	10:30	11:00	11:00	11:40
Initial Vacuum (inHg)	30	30	30	30	30
End Time	12:30	13:15	13:50	13:50	14:40
Final Vacuum (inHg)	6	6	7	5	6
Approximate Total Time (min)	150	165	170	170	180
Sample Analysis	VOCs by TO-15		VOCs by TO-15		VOCs by TO-15

Sampler Information			
Sampled by:	Connor Hicks	Sampler Signature:	Date:
		<i>Connor Hicks</i>	10/18/2024

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud. DUP-3 is taken at SGP-20

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill	Date:	9/26/2024
Project Number:	23050459 RI-7	Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC	Calibration Date:	9/23/2024
Weather:	Overcast		
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444		

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant		
Sample ID	SGP-28	SGP-29			
Canister ID	6L1225	6L2899			
Regulator ID	25190	23184			
Canister Volume (L)	6	6	6		
Ambient Temp (°F)	79	79			
Barometric Pressure (inHg)	30.0	30.0			

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump		
He Concentration in Shroud (%)	18.2	16.9			
He Detected in Leak Test (Y or N)	No	No	No		
He Conc. Detected in Leak Test (ppm)	0	0			
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%			
Leak Test Passed (Yes/No) ¹	Yes	Yes			

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	72	to	96	60	to	132		to			to			to		
Volume (mL)	544			1543												
Purge Flow Rate (mL/min)	200			200												
Purge Interval (3x Vol.) (min)	8.2			23.1												
Actual Purge Time (min)	20.0			25.0												

Sample Collection					
Start Time	12:10	12:45			
Initial Vacuum (inHg)	30	20			
End Time	15:00	14:10			
Final Vacuum (inHg)	6	6			
Approximate Total Time (min)	170	85			
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15		

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	Date: 10/18/2024

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% or the helium concentration in the shroud. DUP-3 is taken at SGP-20

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill			Date:	9/30/2024
Project Number:	23050459 RI-7			Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC			Calibration Date:	9/23/2024
Weather:	Overcast				
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444				

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-21	SGP-22	SGP-23	SGP-24	SGL-25
Canister ID	6L1849	6L0610	6L0575	6L0641	6L1316
Regulator ID	23399	23140	23117	23728	23345
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	80	79	78	78	76
Barometric Pressure (inHg)	29.9	29.9	29.9	29.9	29.9

Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	16.7	18.3	15.1	17.2	15.8
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0	0	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No) ¹	Yes	Yes	Yes	Yes	Yes

Purge Information																
Enter Construction Details →	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	0.17" ID	0.25" ID	Sand Pack	
	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	Total Tubing (ft)	Total Tubing (in)	Interval (in)	
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	96	60	to	132	60	to	96	36	to	48	
Volume (mL)	1543			781			1543			781			272			
Purge Flow Rate (mL/min)	200			200			200			200			200			
Purge Interval (3x Vol.) (min)	23.1			11.7			23.1			11.7			4.1			
Actual Purge Time (min)	25.0			15.0			25.0			15.0			5.0			

Sample Collection					
Start Time	11:50	11:25	11:05	10:35	10:10
Initial Vacuum (inHg)	30	28	30	30	29
End Time	14:40	14:10	13:30	13:09	12:35
Final Vacuum (inHg)	6	6	6	5	7
Approximate Total Time (min)	170	165	145	154	145
Sample Analysis	VOCs by TO-15		VOCs by TO-15		VOCs by TO-15

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/30/2024

- Notes:**
- Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 - Duplicate-4 is taken at SGL-25.

SOIL VAPOR FIELD SAMPLING FORM



Project Name:	Cliffdale Landfill	Date:	9/30/2024
Project Number:	23050459 RI-7	Air Temp (°F):	80
Location:	7583 Lowell Harris Rd Fayetteville, NC	Calibration Date:	9/23/2024
Weather:	Overcast		
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444		

Sample Information				
Sample Type	Soil Gas Implant	Soil Gas Implant		
Sample ID	SGL-26	Duplicate-4		
Canister ID	6L2963	6L2169		
Regulator ID	24537	23756		
Canister Volume (L)	6	6		
Ambient Temp (°F)	76	76		
Barometric Pressure (inHg)	29.9	29.9		

Leak Test Information				
Purge Method	Personal Pump	Personal Pump		
He Concentration in Shroud (%)	16.7	15.8		
He Detected in Leak Test (Y or N)	No	No		
He Conc. Detected in Leak Test (ppm)	0	0		
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%		
Leak Test Passed (Yes/No) ¹	Yes	Yes		

Purge Information																		
	0.17" ID			0.25" ID			0.17" ID			0.25" ID			0.17" ID			0.25" ID		
	Total Tubing (ft)	Total Tubing (in)	Sand Pack Interval (in)	Total Tubing (ft)	Total Tubing (in)	Sand Pack Interval (in)	Total Tubing (ft)	Total Tubing (in)	Sand Pack Interval (in)	Total Tubing (ft)	Total Tubing (in)	Sand Pack Interval (in)	Total Tubing (ft)	Total Tubing (in)	Sand Pack Interval (in)			
Enter Construction Details →	6	0	12	5	0	12					0				0			
Sand Pack Interval Depth (in-bgs)	48	to	60	36	to	48					to				to			
Volume (mL)	277			272														
Purge Flow Rate (mL/min)	200			200														
Purge Interval (3x Vol.) (min)	4.1			4.1														
Actual Purge Time (min)	5.0			5.0														

Sample Collection				
Start Time	09:55	10:10		
Initial Vacuum (inHg)	30	30		
End Time	12:15	12:35		
Final Vacuum (inHg)	2	7		
Approximate Total Time (min)	140	145		
Sample Analysis	VOCs by TO-15	VOCs by TO-15		

Sampler Information			
Sampled by:	James Waters	Sampler Signature:	<i>James A. Waters</i>
		Date:	9/30/2024

- Notes:**
- Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.
 - Duplicate-4 is taken at SGL-25.

LANDFILL GAS SCREENING FORM



Project Name:	Cliffdale LF	Location:	7583 Lowell Harris Rd	Meter Type/ Meter Name/ Serial No.:			
NCDEQ ID No.:	NCD980502900	Date:	9/26/2024	Gas Analyzer	GEM 5000	500537	
S&ME Project No.:	23050459	Weather:	Overcast	PID	Mini Rae 3000 (Pine)	592-600854	Pre Calibration Time: 845
Task Order:	RI-7	S&ME Personnel:	Logan Hester	Thermo Hygrometer	PROTMEX	H111-H17911	Post Calibration Time: 1345

PRE Equipment Calibration				Calibration Notes	POST Equipment Calibration					
PID (Isobutylene)	0 ppm =	NA	100 ppm =		NA	PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA
Fresh Air	CH ₄ (0%) =	0.0%	O ₂ (20.9%) =		20.9%	Fresh Air	CH ₄ (0%) =	0.0%	O ₂ (20.9%) =	20.7%
Methane High	CH ₄ (50%) =	50.0%	CO ₂ (35%) =		35.0%	Methane High	CH ₄ (50%) =	50.2%	CO ₂ (35%) =	34.8%
	O ₂ (0%) =	0.0%					O ₂ (0%) =	0.0%		
H2S Mix	CH ₄ (2.5%) =	2.5%	O ₂ (18%) =		18.0%	H2S Mix	CH ₄ (2.5%) =	2.5%	O ₂ (18%) =	17.9%
	H ₂ S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm	H ₂ S (10 ppm) =		10 ppm	CO (50 ppm) =	50 ppm	

Screening Data

Sample Location	Time	VOCs		Methane		Carbon Dioxide	Oxygen	Hydrogen Sulfide	Barometric Pressure	Temperature	Humidity
ID	hr:min	ppm-v	%	volume in air (%)	% LEL (100% LEL = 5% CH ₄)	%	%	ppm-v	in-Hg	°F	%
BG-1	09:05	0.0	0	0.0	0	2.1	19.8	0	29.91	75.0	89
BG-2	09:09	0.0	0	0.0	0	2.0	19.6	0	29.91	75.0	89
SGP-1	13:00	0.5	0	22.8	100	28.7	0.0	98	29.78	80.0	79
SGP-2	12:51	1.2	0	52.4	100	35.0	0.0	3	29.78	80.0	79
SGP-3	12:45	1.1	0	49.8	100	36.1	0.0	2	29.78	80.0	80
SGP-4	12:39	0.3	0	35.0	100	23.1	0.1	0	29.77	80.0	80
SGP-5	13:10	1.2	0	10.2	100	18.9	3.2	0	29.77	80.0	80
SGP-6	12:29	0.8	0	54.2	100	32.1	0.1	14	29.77	80.0	80
SGP-7	12:23	2.1	0	58.9	100	33.2	0.1	12	29.77	80.0	80
SGP-8	12:19	0.2	0	65.3	100	34.5	0.1	20	29.78	80.0	80
SGP-9	12:15	1.8	0	62.6	100	37.3	0.1	0	29.78	81.0	80
SGP-10	11:50	3.5	0	59.2	100	42.1	0.1	11	29.75	79.0	81
SGP-11	11:56	2.1	0	61.2	100	38.7	0.1	13	29.77	79.0	81
SGP-12	12:01	3.3	0	68.4	100	31.5	0.1	18	29.76	81.0	80
SGP-13	12:08	2.1	0	61.2	100	30.2	0.1	1	29.78	81.0	80
SGP-14	11:34	4.3	0	60.2	100	39.7	0.1	2	29.74	79.0	81
SGP-18	10:02	1.2	0	58.0	100	41.9	0.1	22	29.77	77.0	87
SGP-19	09:50	1.6	0	57.7	100	42.1	0.1	27	29.76	76.0	87
SGP-20	09:41	0.0	0	57.4	100	42.5	0.1	46	29.76	75.0	89
SGP-21	10:49	1.1	0	21.2	100	15.4	12.8	2	29.76	78.0	84
SGP-22	10:40	0.8	0	48.9	100	38.9	2.4	9	29.76	78.0	84
SGP-23	10:31	0.6	0	60.5	100	43.2	0.1	12	29.77	77.0	86
SGP-24	10:23	1.1	0	26.5	100	16.4	11.2	0	29.77	77.0	86

Name	Signature	Date	Notes:
(1) Logan Hester		9/26/2024	

LANDFILL GAS SCREENING FORM



Project Name:	Cliffdale LF	Location:	7583 Lowell Harris Rd	Meter Type/ Meter Name/ Serial No.:		
NCDEQ ID No.:	NCD980502900	Date:	9/26/2024	Gas Analyzer	GEM 5000	500537
S&ME Project No.:	23050459	Weather:	Overcast	PID	Mini Rae 3000 (Pine)	592-600854
Task Order:	RI-7	S&ME Personnel:	Logan Hester	Thermo Hygrometer	PROTMEX	H111-H17911
				Pre Calibration Time:		845
				Post Calibration Time:		1345

PRE Equipment Calibration				Calibration Notes	POST Equipment Calibration					
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA		PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA
Fresh Air	CH ₄ (0%) =	0.0%	O ₂ (20.9%) =	20.9%		Fresh Air	CH ₄ (0%) =	0.0%	O ₂ (20.9%) =	20.7%
Methane High	CH ₄ (50%) =	50.0%	CO ₂ (35%) =	35.0%		Methane High	CH ₄ (50%) =	50.2%	CO ₂ (35%) =	34.8%
	O ₂ (0%) =	0.0%					O ₂ (0%) =	0.0%		
H2S Mix	CH ₄ (2.5%) =	2.5%	O ₂ (18%) =	18.0%		H2S Mix	CH ₄ (2.5%) =	2.5%	O ₂ (18%) =	17.9%
	H ₂ S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm			H ₂ S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm

Screening Data

Sample Location	Time	VOCs		Methane		Carbon Dioxide	Oxygen	Hydrogen Sulfide	Barometric Pressure	Temperature	Humidity
		ppm-v	%	volume in air (%)	% LEL (100% LEL = 5% CH4)						
SGP-25	10:18	1.6	0	61.7	100	37.9	0.4	16	29.77	77.0	87
SGP-26	10:12	0.0	0	53.5	100	32.3	2.4	22	29.76	77.0	87
SGP-27	09:28	0.0	0	0.0	0	0.7	19.1	0	29.77	75.0	89
SGP-28	09:20	0.0	0	0.0	0	2.8	18.3	0	29.79	75.0	89
SGP-29	09:35	1.5	0	60.3	100	39.5	0.2	13	29.77	75.0	89
BG-3	13:15	0.0	0	0.0	0	2.2	18.9	0	29.90	81.0	79
BG-4	13:20	0.0	0	0.0	0	2.4	18.6	0	29.90	81.0	79

Name	Signature	Date	Notes:
(1) Logan Hester		9/26/2024	

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline	Purge Date:	October 1, 2024
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC	Purge Time (Min.):	45
Project Number:	23050459	Sample Date:	October 1, 2024
Source Well:	MW-1	Sample Time:	10:55
Locked?:	Yes	Air Temp:	80 ° F
Sampled By:	James Waters		
Weather:	Overcast		

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24	09:30	1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	33.56	ft-TOC	Well Diameter	2	inch
Total Well Depth:	40.50	ft-TOC	Well Volume	1.1	gal
Height of Water Column:	6.94	feet	3 * Well Volume	3.4	gal
Screen Length:	10	ft-GRD	5 * Well Volume	5.7	gal
Stickup Height:	2.5	ft-GRD			

Well Purging Information

Purge Method:
Purge Start Time:
End Time:

Total Volume Purged: gal
 Well Purged Dry?:

Field Parameters

Cumulative Volume (Gal)	Time	pH □ (s.u.)	Temp □ (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	10:10	7.3	20.5	1,246	3076	No Odors
0.7	10:15	7.2	20	1,287	185	No Odors
1.0	10:20	7.2	20.3	1,256	186	No Odors
1.3	10:25	7.2	20.7	1,227	189	No Odors
1.7	10:30	7.2	20.5	1,238	93	No Odors
2.0	10:35	7.2	20.3	1,245	56	No Odors
2.3	10:40	7.2	19.9	1,241	48	No Odors
2.7	10:45	7.2	19.8	1,237	53	No Odors
3.0	10:50	7.2	19.8	1,239	52	No Odors

Sample Method:
Sample Time:

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGM-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) James Waters		10/1/2024

Notes:

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	October 1, 2024
Source Well:	MW-3	Purge Time (Min.):	25
Locked?:	Yes	Sample Date:	October 1, 2024
Sampled By:	Logan Hester	Sample Time:	10:25
Weather:	Overcast	Air Temp:	72 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24		4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24		1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>Measuring Point:</td><td colspan="2">Top of Casing</td></tr> <tr><td>Depth to Water:</td><td>14.24</td><td>ft-TOC</td></tr> <tr><td>Total Well Depth:</td><td>17.50</td><td>ft-TOC</td></tr> <tr><td>Height of Water Column:</td><td>3.26</td><td>feet</td></tr> <tr><td>Screen Length:</td><td>10</td><td>ft-GRD</td></tr> <tr><td>Stickup Height:</td><td>2.5</td><td>ft-GRD</td></tr> </table>	Measuring Point:	Top of Casing		Depth to Water:	14.24	ft-TOC	Total Well Depth:	17.50	ft-TOC	Height of Water Column:	3.26	feet	Screen Length:	10	ft-GRD	Stickup Height:	2.5	ft-GRD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr><th colspan="3">Well Volume</th></tr> </thead> <tbody> <tr><td>Well Diameter</td><td>2</td><td>inch</td></tr> <tr><td>Well Volume</td><td>0.5</td><td>gal</td></tr> <tr><td>3 * Well Volume</td><td>1.6</td><td>gal</td></tr> <tr><td>5 * Well Volume</td><td>2.7</td><td>gal</td></tr> </tbody> </table>	Well Volume			Well Diameter	2	inch	Well Volume	0.5	gal	3 * Well Volume	1.6	gal	5 * Well Volume	2.7	gal
Measuring Point:	Top of Casing																																	
Depth to Water:	14.24	ft-TOC																																
Total Well Depth:	17.50	ft-TOC																																
Height of Water Column:	3.26	feet																																
Screen Length:	10	ft-GRD																																
Stickup Height:	2.5	ft-GRD																																
Well Volume																																		
Well Diameter	2	inch																																
Well Volume	0.5	gal																																
3 * Well Volume	1.6	gal																																
5 * Well Volume	2.7	gal																																

Well Purging Information

Purge Method:	Peristaltic Pump	Purge Start Time:	09:50	End Time:	10:15
Total Volume Purged:	1.3	gal	Well Purged Dry?:	No	

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	09:55	6.6	21.5	4	54	
0.5	10:00	6.4	21.5	4	22	
0.8	10:05	6.4	21.4	4	21	
1.0	10:10	6.3	21.4	4	8.8	
1.3	10:15	6.3	21.4	4	6.9	

Sample Method:	Peristaltic Pump	Sample Time:	10:25
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Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGF-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) Logan Hester		10/18/2024

Notes: Duplicate sample DUP-01 taken here.

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline	Purge Date:	October 1, 2024
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC	Purge Time (Min.):	
Project Number:	23050459	Sample Date:	October 1, 2024
Source Well:	MW-4	Sample Time:	12:00
Locked?:	Yes	Air Temp:	80 ° F
Sampled By:	James Waters		
Weather:	Overcast		

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24	09:30	1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	29.87	ft-TOC	Well Diameter	2	inch
Total Well Depth:	30.60	ft-TOC	Well Volume	0.1	gal
Height of Water Column:	0.73	feet	3 * Well Volume	0.4	gal
Screen Length:	10	ft-GRD	5 * Well Volume	0.6	gal
Stickup Height:	2.5	ft-GRD	28#75217"20		

Well Purging Information

Purge Method:
Purge Start Time:
End Time:

Total Volume Purged: gal
 Well Purged Dry?:

Field Parameters

Cumulative Volume (Gal)	Time	pH □ (s.u.)	Temp □ (°C)	Cond µS/cm	Turbidity NTU	Comments
						Landfill Odors

Sample Method:
Sample Time:

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl				

Name	Signature	Date
(1) James Waters		10/1/2024

Notes: Not enough water in the water column to record parameters. Only able to fill VOC containers.

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline	Purge Date:	October 1, 2024
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC	Purge Time (Min.):	30
Project Number:	23050459	Sample Date:	October 1, 2024
Source Well:	MW-5	Sample Time:	15:15
Locked?:	Yes	Air Temp:	80 ° F
Sampled By:	James Waters		
Weather:	Overcast		

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24	09:30	1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	23.88	ft-TOC	Well Diameter	2	inch
Total Well Depth:	29.50	ft-TOC	Well Volume	0.9	gal
Height of Water Column:	5.62	feet	3 * Well Volume	2.8	gal
Screen Length:	10	ft-GRD	5 * Well Volume	4.6	gal
Stickup Height:	2.5	ft-GRD			

Well Purging Information

Purge Method:
Purge Start Time:
End Time:

Total Volume Purged: gal
 Well Purged Dry?:

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	14:45	6.7	21.1	808	1427	No Odors
0.7	14:50	6.8	20.4	807	130	No Odors
1.0	14:55	6.9	20.4	796	24	No Odors
1.3	15:00	6.9	20.3	795	19	No Odors
1.7	15:05	6.9	20.3	794	14	No Odors
2.0	15:10	6.9	20.2	789	9.2	No Odors

Sample Method:
Sample Time:

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) James Waters		10/1/2024

Notes:

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline	Purge Date:	October 1, 2024
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC	Purge Time (Min.):	30
Project Number:	23050459	Sample Date:	October 1, 2024
Source Well:	MW-6	Sample Time:	13:25
Locked?:	Yes	Air Temp:	80 ° F
Sampled By:	James Waters		
Weather:	Overcast		

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24	09:30	1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	23.21	ft-TOC	Well Diameter	2	inch
Total Well Depth:	28.50	ft-TOC	Well Volume	0.9	gal
Height of Water Column:	5.29	feet	3 * Well Volume	2.6	gal
Screen Length:	10	ft-GRD	5 * Well Volume	4.3	gal
Stickup Height:	3.5	ft-GRD			

Well Purging Information

Purge Method:	Submersible Pump	Purge Start Time:	12:50	End Time:	13:20
Total Volume Purged:	1.3	gal	Well Purged Dry?:	Yes	

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	12:55	6.8	20.6	822	Over Range	Landfill Odors
0.7	13:00	6.9	20.3	816	Over Range	Landfill Odors
1.0	13:05	6.9	20.7	820	Over Range	Landfill Odors
1.3	13:10	6.9	21	806	1228	Landfill Odors

Sample Method:	Submersible Pump	Sample Time:	13:25
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Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGF-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) James Waters		10/1/2024

Notes: MW-6 water level was declining. MW-6 was allowed to recover, then sampled.

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	October 1, 2024
Source Well:	MW-7	Purge Time (Min.):	20
Locked?:	Yes	Sample Date:	October 1, 2024
Sampled By:	Logan Hester	Sample Time:	13:15
Weather:	Overcast	Air Temp:	78 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24		4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24		1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	10.60	ft-TOC	Well Diameter	2	inch
Total Well Depth:	16.50	ft-TOC	Well Volume	1.0	gal
Height of Water Column:	5.90	feet	3 * Well Volume	2.9	gal
Screen Length:	10	ft-GRD	5 * Well Volume	4.8	gal
Stickup Height:	2.5	ft-GRD			

Well Purging Information

Purge Method:	Peristaltic Pump	Purge Start Time:	12:50	End Time:	13:10
Total Volume Purged:	1.0 gal	Well Purged Dry?:	No		

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	12:55	5.4	22.8	947	16	
0.5	13:00	5.3	22.7	921	4.9	
0.8	13:05	5.3	22.7	913	3.2	
1.0	13:10	5.3	22.7	898	2.7	

Sample Method:	Peristaltic Pump	Sample Time:	13:15
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Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) Logan Hester		10/18/2024

Notes:

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline	Purge Date:	October 1, 2024
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC	Purge Time (Min.):	15
Project Number:	23050459	Sample Date:	October 1, 2024
Source Well:	MW-8	Sample Time:	11:45
Locked?:	Yes	Air Temp:	75 ° F
Sampled By:	Logan Hester		
Weather:	Overcast		

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24		4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24		1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	12.68	ft-TOC	Well Diameter	2	inch
Total Well Depth:	16.50	ft-TOC	Well Volume	0.6	gal
Height of Water Column:	3.82	feet	3 * Well Volume	1.9	gal
Screen Length:	10	ft-GRD	5 * Well Volume	3.1	gal
Stickup Height:	2.5	ft-GRD			

Well Purging Information

Purge Method:
Purge Start Time:
End Time:

Total Volume Purged: gal
 Well Purged Dry?:

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	11:25	5.8	21.5	1,910	16	
0.5	11:30	5.8	21.4	1,878	5.9	
0.8	11:35	5.7	21.4	1,822	1.3	

Sample Method:
Sample Time:

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) Logan Hester	_____	10/18/2024

Notes:

GROUNDWATER SAMPLING FORM



Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	October 1, 2024
Source Well:	MW-9	Purge Time (Min.):	15
Locked?:	Yes	Sample Date:	October 1, 2024
Sampled By:	Logan Hester	Sample Time:	12:25
Weather:	Overcast	Air Temp:	76 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	10/1/24		4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	10/1/24		1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing		Well Volume		
Depth to Water:	7.61	ft-TOC	Well Diameter	2	inch
Total Well Depth:	16.50	ft-TOC	Well Volume	1.5	gal
Height of Water Column:	8.89	feet	3 * Well Volume	4.4	gal
Screen Length:	10	ft-GRD	5 * Well Volume	7.3	gal
Stickup Height:	2.5	ft-GRD			

Well Purging Information

Purge Method:	Peristaltic Pump	Purge Start Time:	12:00	End Time:	12:15
Total Volume Purged:	0.8	gal	Well Purged Dry?:	No	

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	12:05	5.6	20.9	1,546	24	
0.5	12:10	5.5	20.9	1,523	16	
0.8	12:15	5.4	20.8	1,519	8.9	

Sample Method:	Peristaltic Pump	Sample Time:	12:25
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Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	2	500 ml A	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	250 ml P	None				

Name	Signature	Date
(1) Logan Hester	_____	10/18/2024

Notes:

Appendix IV- Laboratory Reports and Chains of Custody

10/22/2024

Connor Hicks

S & ME, Inc.

3201 Spring Forest Road

Raleigh NC 27616

Project Name: Cliffdale LF

Project #: 23050459

Workorder #: 2410133A

Dear Connor Hicks

The following report includes the data for the above referenced project for sample(s) received on 10/2/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

WORK ORDER #: 2410133A

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/22/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SGP-1	TO-15	7.1 "Hg	1.9 psi
02A	SGP-2	TO-15	8.2 "Hg	1.9 psi
03A	SGP-3	TO-15	6.5 "Hg	1.9 psi
04A	SGP-4	TO-15	6.7 "Hg	1.9 psi
05A	SGP-5	TO-15	7.1 "Hg	1.9 psi
06A	SGI-6	TO-15	8.2 "Hg	1.9 psi
07A	SGP-7	TO-15	7.3 "Hg	1.9 psi
08A	Duplicate-1	TO-15	4.9 "Hg	1.9 psi
09A	SGP-8	TO-15	11.2 "Hg	2 psi
10A	SGP-9	TO-15	5.9 "Hg	1.8 psi
11A	SGP-10	TO-15	6.5 "Hg	1.9 psi
12A	SGP-11	TO-15	9.2 "Hg	1.8 psi
13A	SGI-12	TO-15	6.7 "Hg	1.8 psi
14A	SGP-13	TO-15	10.6 "Hg	1.9 psi
15A	SGP-14	TO-15	8.2 "Hg	1.7 psi
16A	Duplicate-2	TO-15	7.3 "Hg	2.1 psi
17A	SGI-18	TO-15	7.6 "Hg	1.9 psi
18A	SGP-19	TO-15	7.1 "Hg	1.9 psi
19A	SGP-20	TO-15	7.3 "Hg	2 psi
20A	SGP-27	TO-15	7.8 "Hg	2 psi
21A	SGP-28	TO-15	9.4 "Hg	1.7 psi
22A	SGP-24	TO-15	4.7 "Hg	2 psi
23A	Duplicate-3	TO-15	6.3 "Hg	1.9 psi

Continued on next page

WORK ORDER #: 2410133A

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/22/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
24A	SGI-26	TO-15	8.8 "Hg	2.2 psi
25A	SGI-25	TO-15	8.2 "Hg	1.9 psi
26A	Lab Blank	TO-15	NA	NA
26B	Lab Blank	TO-15	NA	NA
26C	Lab Blank	TO-15	NA	NA
27A	CCV	TO-15	NA	NA
27B	CCV	TO-15	NA	NA
27C	CCV	TO-15	NA	NA
28A	LCS	TO-15	NA	NA
28AA	LCSD	TO-15	NA	NA
28B	LCS	TO-15	NA	NA
28BB	LCSD	TO-15	NA	NA
28C	LCS	TO-15	NA	NA
28CC	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 10/22/24

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2703122, NH NELAP-209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
 Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

LABORATORY NARRATIVE
EPA Method TO-15
S & ME, Inc.
Workorder# 2410133A

Twenty-five 6 Liter Summa Canister samples were received on October 02, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Dilution was performed on samples SGP-2, SGI-6, SGP-27 and SGP-28 due to the presence of high level target species.

Dilution was performed on samples SGP-1, SGP-4, SGP-5, SGP-7, SGP-8, SGP-9, SGP-10, SGP-11, SGI-12, SGP-14, Duplicate-2, SGI-18, SGP-19, SGP-20, Duplicate-3, SGI-26 and SGI-25 due to the presence of high level non-target species.

The presence of a closely eluting non-target peak in sample SGP-4, SGP-10, SGP-11, Duplicate-2, SGI-18 and SGP-19 is interfering with the quantitation mass ion for 4-Ethyltoluene. The reported 4-Ethyltoluene concentration is flagged with a "CN" flag to indicate a high bias due to matrix contribution.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-1

Lab ID#: 2410133A-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	100	36	520
Freon 114	7.4	140	52	960
Vinyl Chloride	7.4	32	19	83
Hexane	7.4	360	26	1300
Cyclohexane	7.4	80	25	270
2,2,4-Trimethylpentane	7.4	12	34	55
Benzene	7.4	81	24	260
Heptane	7.4	230	30	930
Chlorobenzene	7.4	7.5	34	35
m,p-Xylene	7.4	8.2	32	36
Cumene	7.4	57	36	280
Propylbenzene	7.4	37	36	180
1,2,4-Trimethylbenzene	7.4	11	36	53
1,4-Dichlorobenzene	7.4	12	44	74

Client Sample ID: SGP-2

Lab ID#: 2410133A-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	190	24000	960	120000
Freon 114	190	220	1400	1500
Hexane	190	270	680	960
Cyclohexane	190	310	670	1100
Benzene	190	240	620	780
Heptane	190	380	800	1600

Client Sample ID: SGP-3

Lab ID#: 2410133A-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.72	31	3.6	150
Freon 114	0.72	100	5.0	710
Acetone	7.2	41	17	98

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SGP-3

Lab ID#: 2410133A-03A

2-Propanol	2.9	3.9	7.1	9.7
Carbon Disulfide	2.9	6.0	9.0	19
Hexane	0.72	2.0	2.5	7.2
2-Butanone (Methyl Ethyl Ketone)	2.9	3.3	8.5	9.8
Cyclohexane	0.72	1.4	2.5	5.0
2,2,4-Trimethylpentane	0.72	3.4	3.4	16
Benzene	0.72	3.2	2.3	10
Toluene	1.4	13	5.4	50
Tetrachloroethene	0.72	2.3	4.9	16
1,3-Dichlorobenzene	0.72	0.74	4.3	4.5

Client Sample ID: SGP-4

Lab ID#: 2410133A-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.2	180	36	920
Freon 114	7.2	120	51	840
Vinyl Chloride	7.2	22	18	57
Hexane	7.2	350	26	1200
cis-1,2-Dichloroethene	7.2	56	29	220
Cyclohexane	7.2	310	25	1000
2,2,4-Trimethylpentane	7.2	340	34	1600
Benzene	7.2	120	23	370
Heptane	7.2	600	30	2500
Toluene	7.2	18	27	69
Chlorobenzene	7.2	16	33	74
Ethyl Benzene	7.2	280	31	1200
m,p-Xylene	7.2	1400	31	5900
Propylbenzene	7.2	22	36	110
4-Ethyltoluene	7.2	19 CN	36	92 CN
1,3,5-Trimethylbenzene	7.2	12	36	61
1,2,4-Trimethylbenzene	7.2	18	36	88

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-5

Lab ID#: 2410133A-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	110	36	520
Freon 114	7.4	280	52	2000
Vinyl Chloride	7.4	720	19	1800
Chloroethane	30	290	78	780
1,1-Dichloroethene	7.4	84	29	330
Acetone	30	180	70	440
trans-1,2-Dichloroethene	7.4	40	29	160
Hexane	7.4	950	26	3300
1,1-Dichloroethane	7.4	480	30	1900
cis-1,2-Dichloroethene	7.4	360	29	1400
Cyclohexane	7.4	1000	25	3500
2,2,4-Trimethylpentane	7.4	340	34	1600
Benzene	7.4	130	24	410
Heptane	7.4	1100	30	4500
Trichloroethene	7.4	66	40	360
Tetrachloroethene	7.4	15	50	100
m,p-Xylene	7.4	10	32	45

Client Sample ID: SGI-6

Lab ID#: 2410133A-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	190	350	960	1700
Freon 114	190	270	1400	1900
Chloroethane	780	28000	2000	74000
Hexane	190	1200	680	4200
Cyclohexane	190	1000	670	3600
2,2,4-Trimethylpentane	190	290	910	1300
Benzene	190	380	620	1200
Heptane	190	1400	800	5900

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-7

Lab ID#: 2410133A-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	15	1200	74	5700
Freon 114	15	84	100	590
Chloroethane	60	94	160	250
Freon 11	15	580	84	3300
Hexane	15	3600	52	13000
Cyclohexane	15	3900	51	14000
2,2,4-Trimethylpentane	15	470	70	2200
Benzene	15	1000	48	3200
Heptane	15	8900	61	36000
Toluene	15	77	56	290
Ethyl Benzene	15	350	65	1500
m,p-Xylene	15	1000	65	4500
o-Xylene	15	54	65	230
Cumene	15	120	73	590
Propylbenzene	15	64	73	320
1,3,5-Trimethylbenzene	15	16	73	77
1,2,4-Trimethylbenzene	15	47	73	230
1,4-Dichlorobenzene	15	18	90	110

Client Sample ID: Duplicate-1

Lab ID#: 2410133A-08A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	7.1	3.3	35
Freon 114	0.68	20	4.7	140
Acetone	6.8	15	16	35
Benzene	0.68	0.96	2.2	3.0
Toluene	1.4	3.0	5.1	11

Client Sample ID: SGP-8

Lab ID#: 2410133A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-8

Lab ID#: 2410133A-09A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	9.0	110	45	560
Freon 114	9.0	140	63	960
Vinyl Chloride	9.0	18	23	46
Hexane	9.0	450	32	1600
Cyclohexane	9.0	280	31	980
2,2,4-Trimethylpentane	9.0	420	42	2000
Benzene	9.0	270	29	870
Heptane	9.0	430	37	1800
Toluene	9.0	14	34	51
Chlorobenzene	9.0	37	42	170
Ethyl Benzene	9.0	33	39	140
m,p-Xylene	9.0	69	39	300
Cumene	9.0	54	44	260
Propylbenzene	9.0	31	44	150
1,4-Dichlorobenzene	9.0	9.3	54	56

Client Sample ID: SGP-9

Lab ID#: 2410133A-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	14	1600	69	7800
Freon 114	14	260	98	1800
Vinyl Chloride	14	24	36	60
Chloroethane	56	680	150	1800
Acetone	56	160	130	380
Hexane	14	400	49	1400
1,1-Dichloroethane	14	85	56	340
cis-1,2-Dichloroethene	14	51	55	200
Cyclohexane	14	610	48	2100
2,2,4-Trimethylpentane	14	350	65	1600
Benzene	14	640	44	2100
Heptane	14	670	57	2800
Trichloroethene	14	39	75	210

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-9

Lab ID#: 2410133A-10A

Toluene	14	120	52	450
Tetrachloroethene	14	36	95	240
Chlorobenzene	14	44	64	200
Ethyl Benzene	14	170	60	750
m,p-Xylene	14	320	60	1400
o-Xylene	14	66	60	290
Cumene	14	55	68	270
1,3,5-Trimethylbenzene	14	15	68	76
1,2,4-Trimethylbenzene	14	16	68	76

Client Sample ID: SGP-10

Lab ID#: 2410133A-11A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	24	170	120	840
Freon 114	24	99	170	690
Vinyl Chloride	24	120	61	310
trans-1,2-Dichloroethene	24	31	95	120
Hexane	24	2000	84	7100
cis-1,2-Dichloroethene	24	190	95	750
Cyclohexane	24	1800	83	6400
2,2,4-Trimethylpentane	24	210	110	980
Benzene	24	1100	77	3600
Heptane	24	5000	98	21000
Toluene	24	200	90	740
Ethyl Benzene	24	3300	100	14000
m,p-Xylene	24	4800	100	21000
o-Xylene	24	290	100	1300
Cumene	24	160	120	760
Propylbenzene	24	85	120	420
4-Ethyltoluene	24	110 CN	120	540 CN
1,3,5-Trimethylbenzene	24	84	120	410
1,2,4-Trimethylbenzene	24	170	120	850
1,4-Dichlorobenzene	24	160	140	990

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-11

Lab ID#: 2410133A-12A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	16	750	80	3700
Freon 114	16	200	110	1400
Vinyl Chloride	16	99	41	250
Chloroethane	65	420	170	1100
Acetone	65	74	150	180
trans-1,2-Dichloroethene	16	44	64	180
Hexane	16	1600	57	5600
1,1-Dichloroethane	16	77	66	310
cis-1,2-Dichloroethene	16	86	64	340
Cyclohexane	16	1300	56	4500
2,2,4-Trimethylpentane	16	320	76	1500
Benzene	16	1200	52	3800
Heptane	16	4000	66	16000
Trichloroethene	16	16	87	87
Toluene	16	44	61	160
Chlorobenzene	16	21	74	99
Ethyl Benzene	16	800	70	3400
m,p-Xylene	16	3300	70	14000
o-Xylene	16	570	70	2500
Cumene	16	71	80	350
Propylbenzene	16	44	80	220
4-Ethyltoluene	16	47 CN	80	230 CN
1,3,5-Trimethylbenzene	16	31	80	150
1,2,4-Trimethylbenzene	16	72	80	350
1,4-Dichlorobenzene	16	17	97	100

Client Sample ID: SGI-12

Lab ID#: 2410133A-13A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.2	190	36	950
Freon 114	7.2	190	50	1300
Vinyl Chloride	7.2	29	18	75

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGI-12

Lab ID#: 2410133A-13A

Chloroethane	29	54	76	140
Acetone	29	650	68	1600
2-Propanol	36	44	88	110
Hexane	7.2	410	25	1400
2-Butanone (Methyl Ethyl Ketone)	29	53	85	160
Cyclohexane	7.2	260	25	900
2,2,4-Trimethylpentane	7.2	320	34	1500
Benzene	7.2	680	23	2200
Heptane	7.2	360	30	1500
Toluene	7.2	410	27	1500
Tetrachloroethene	7.2	12	49	79
Chlorobenzene	7.2	260	33	1200
Ethyl Benzene	7.2	68	31	300
m,p-Xylene	7.2	160	31	700
o-Xylene	7.2	45	31	200
Propylbenzene	7.2	71	35	350
1,3,5-Trimethylbenzene	7.2	18	35	86
1,2,4-Trimethylbenzene	7.2	29	35	140
1,4-Dichlorobenzene	7.2	8.4	43	51

Client Sample ID: SGP-13

Lab ID#: 2410133A-14A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.88	4.3	4.3	21
Freon 114	0.88	20	6.1	140
Acetone	8.8	13	21	30
2-Propanol	3.5	6.4	8.6	16
Cyclohexane	0.88	5.8	3.0	20
2,2,4-Trimethylpentane	0.88	1.7	4.1	7.9
Trichloroethene	0.88	2.1	4.7	11
Tetrachloroethene	0.88	2.2	5.9	15
1,3-Dichlorobenzene	0.88	1.5	5.3	9.1

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-14

Lab ID#: 2410133A-15A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.7	190	38	950
Freon 114	7.7	240	54	1600
Vinyl Chloride	7.7	38	20	98
Chloroethane	31	62	81	160
Hexane	7.7	690	27	2400
Tetrahydrofuran	7.7	42	23	120
Cyclohexane	7.7	640	26	2200
2,2,4-Trimethylpentane	7.7	230	36	1000
Benzene	7.7	520	24	1700
Heptane	7.7	1800	32	7500
Toluene	7.7	22	29	84
Chlorobenzene	7.7	130	35	590
Ethyl Benzene	7.7	140	33	630
m,p-Xylene	7.7	310	33	1400
o-Xylene	7.7	20	33	85
Cumene	7.7	76	38	370
Propylbenzene	7.7	49	38	240
1,2,4-Trimethylbenzene	7.7	23	38	110
1,4-Dichlorobenzene	7.7	18	46	110

Client Sample ID: Duplicate-2

Lab ID#: 2410133A-16A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	15	750	75	3700
Freon 114	15	200	100	1400
Vinyl Chloride	15	110	38	280
Chloroethane	60	380	160	1000
Acetone	60	73	140	170
trans-1,2-Dichloroethene	15	46	60	180
Hexane	15	1600	53	5600
1,1-Dichloroethane	15	81	61	330
cis-1,2-Dichloroethene	15	83	60	330

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: Duplicate-2

Lab ID#: 2410133A-16A

Cyclohexane	15	1300	52	4400
2,2,4-Trimethylpentane	15	340	70	1600
Benzene	15	1200	48	3800
Heptane	15	4000	62	16000
Trichloroethene	15	16	81	86
Toluene	15	41	57	160
Chlorobenzene	15	22	70	100
Ethyl Benzene	15	870	66	3800
m,p-Xylene	15	3600	66	16000
o-Xylene	15	610	66	2600
Cumene	15	83	74	410
Propylbenzene	15	50	74	240
4-Ethyltoluene	15	53 CN	74	260 CN
1,3,5-Trimethylbenzene	15	35	74	170
1,2,4-Trimethylbenzene	15	81	74	400
1,4-Dichlorobenzene	15	20	91	120

Client Sample ID: SGI-18

Lab ID#: 2410133A-17A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.6	100	37	500
Freon 114	7.6	120	53	870
Vinyl Chloride	7.6	35	19	88
Chloroethane	30	48	80	130
Acetone	30	50	72	120
Hexane	7.6	470	27	1600
1,1-Dichloroethane	7.6	10	30	40
cis-1,2-Dichloroethene	7.6	12	30	49
Cyclohexane	7.6	200	26	700
2,2,4-Trimethylpentane	7.6	190	35	870
Benzene	7.6	180	24	590
Heptane	7.6	580	31	2400
Trichloroethene	7.6	9.7	40	52
Toluene	7.6	55	28	210

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGI-18

Lab ID#: 2410133A-17A

Chlorobenzene	7.6	50	35	230
Ethyl Benzene	7.6	610	33	2600
m,p-Xylene	7.6	1100	33	4800
o-Xylene	7.6	29	33	130
Propylbenzene	7.6	48	37	240
4-Ethyltoluene	7.6	57 CN	37	280 CN
1,3,5-Trimethylbenzene	7.6	58	37	290
1,2,4-Trimethylbenzene	7.6	86	37	420

Client Sample ID: SGP-19

Lab ID#: 2410133A-18A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	390	36	1900
Freon 114	7.4	60	52	420
Vinyl Chloride	7.4	21	19	53
Chloroethane	30	85	78	220
Acetone	30	140	70	320
Hexane	7.4	970	26	3400
cis-1,2-Dichloroethene	7.4	14	29	54
Cyclohexane	7.4	580	25	2000
2,2,4-Trimethylpentane	7.4	190	34	900
Benzene	7.4	220	24	700
Heptane	7.4	1200	30	4900
Trichloroethene	7.4	16	40	85
Toluene	7.4	230	28	880
Chlorobenzene	7.4	310	34	1400
Ethyl Benzene	7.4	130	32	550
m,p-Xylene	7.4	600	32	2600
o-Xylene	7.4	73	32	320
Cumene	7.4	99	36	490
Propylbenzene	7.4	60	36	300
4-Ethyltoluene	7.4	54 CN	36	260 CN
1,3,5-Trimethylbenzene	7.4	32	36	160
1,2,4-Trimethylbenzene	7.4	53	36	260

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-19

Lab ID#: 2410133A-18A

1,4-Dichlorobenzene	7.4	12	44	75
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Client Sample ID: SGP-20

Lab ID#: 2410133A-19A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.5	16	37	77
Freon 114	7.5	61	52	420
Vinyl Chloride	7.5	37	19	94
Acetone	30	51	71	120
Hexane	7.5	580	26	2000
cis-1,2-Dichloroethene	7.5	8.9	30	35
Cyclohexane	7.5	890	26	3100
2,2,4-Trimethylpentane	7.5	180	35	870
Benzene	7.5	240	24	770
Heptane	7.5	590	31	2400
Toluene	7.5	8.6	28	32
Chlorobenzene	7.5	170	34	780
Ethyl Benzene	7.5	7.9	32	34
m,p-Xylene	7.5	17	32	74
o-Xylene	7.5	9.3	32	40
Cumene	7.5	17	37	84

Client Sample ID: SGP-27

Lab ID#: 2410133A-20A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	26	4000	130	20000
Freon 114	26	45	180	320
Vinyl Chloride	26	250	65	640
Hexane	26	150	90	540
Cyclohexane	26	80	88	280
2,2,4-Trimethylpentane	26	66	120	310
Benzene	26	130	82	420

Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGP-27

Lab ID#: 2410133A-20A

Heptane	26	120	100	490
Chlorobenzene	26	90	120	420
m,p-Xylene	26	45	110	190
Cumene	26	69	120	340
Propylbenzene	26	33	120	160

Client Sample ID: SGP-28

Lab ID#: 2410133A-21A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.0	4.6	15	23
Freon 114	3.0	80	21	560
Hexane	3.0	72	10	260
Cyclohexane	3.0	35	10	120
2,2,4-Trimethylpentane	3.0	15	14	69
Benzene	3.0	75	9.4	240
Heptane	3.0	40	12	160
Toluene	5.9	19	22	72
Chlorobenzene	3.0	660	14	3000
Ethyl Benzene	3.0	8.9	13	38
Styrene	3.0	4.4	12	19
Cumene	3.0	20	14	96
Propylbenzene	3.0	6.0	14	30
1,4-Dichlorobenzene	3.0	5.0	18	30

Client Sample ID: SGP-24

Lab ID#: 2410133A-22A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	5.1	3.3	25
Freon 114	0.68	27	4.7	190
Chloroethane	2.7	66	7.1	170
Ethanol	6.8	23	13	43
Acetone	6.8	11	16	27

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SGP-24

Lab ID#: 2410133A-22A

2-Propanol	2.7	6.6	6.6	16
Carbon Disulfide	2.7	2.9	8.4	9.0
Hexane	0.68	240	2.4	830
1,1-Dichloroethane	0.68	1.3	2.7	5.2
cis-1,2-Dichloroethene	0.68	0.91	2.7	3.6
Cyclohexane	0.68	96	2.3	330
2,2,4-Trimethylpentane	0.68	41	3.2	190
Benzene	0.68	26	2.2	84
Heptane	0.68	61	2.8	250
Toluene	1.4	3.8	5.1	14
Chlorobenzene	0.68	12	3.1	55
Cumene	0.68	3.4	3.3	17
1,4-Dichlorobenzene	0.68	1.1	4.0	6.8

Client Sample ID: Duplicate-3

Lab ID#: 2410133A-23A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	14	17	71	85
Freon 114	14	66	100	460
Vinyl Chloride	14	40	36	100
Hexane	14	630	50	2200
Cyclohexane	14	950	49	3300
2,2,4-Trimethylpentane	14	200	67	940
Benzene	14	270	46	860
Heptane	14	640	59	2600
Chlorobenzene	14	200	66	910
m,p-Xylene	14	20	62	88
Cumene	14	21	70	100

Client Sample ID: SGI-26

Lab ID#: 2410133A-24A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
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Summary of Detected Compounds EPA METHOD TO-15 GC/MS

Client Sample ID: SGI-26

Lab ID#: 2410133A-24A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 114	16	39	110	270
Vinyl Chloride	16	30	42	76
Chloroethane	65	92	170	240
Hexane	16	440	57	1600
Cyclohexane	16	190	56	660
2,2,4-Trimethylpentane	16	71	76	330
Benzene	16	180	52	580
Heptane	16	80	66	330
Toluene	16	17	61	64
Chlorobenzene	16	120	75	540
Ethyl Benzene	16	32	70	140
m,p-Xylene	16	70	70	310
o-Xylene	16	17	70	74
Cumene	16	98	80	480
Propylbenzene	16	74	80	360
1,3,5-Trimethylbenzene	16	22	80	110
1,2,4-Trimethylbenzene	16	60	80	300

Client Sample ID: SGI-25

Lab ID#: 2410133A-25A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.8	10	38	50
Freon 114	7.8	52	54	360
Vinyl Chloride	7.8	26	20	68
Chloroethane	31	55	82	140
Acetone	31	79	74	190
Hexane	7.8	520	27	1800
1,1-Dichloroethane	7.8	9.4	31	38
2-Butanone (Methyl Ethyl Ketone)	31	120	91	360
Cyclohexane	7.8	190	27	660
2,2,4-Trimethylpentane	7.8	98	36	460
Benzene	7.8	160	25	520

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS**

Client Sample ID: SGI-25

Lab ID#: 2410133A-25A

Heptane	7.8	770	32	3200
Toluene	7.8	16	29	60
1,1,2-Trichloroethane	7.8	240	42	1300
Chlorobenzene	7.8	330	36	1500
Ethyl Benzene	7.8	12	34	53
m,p-Xylene	7.8	23	34	100
o-Xylene	7.8	13	34	55
Cumene	7.8	57	38	280
Propylbenzene	7.8	26	38	130



Air Toxics

Client Sample ID: SGP-1

Lab ID#: 2410133A-01A

EPA METHOD TO-15 GC/MS

File Name:	14101637	Date of Collection:	9/24/24 3:00:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 12:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	100	36	520
Freon 114	7.4	140	52	960
Chloromethane	30	Not Detected	61	Not Detected
Vinyl Chloride	7.4	32	19	83
1,3-Butadiene	7.4	Not Detected	16	Not Detected
Bromomethane	30	Not Detected	110	Not Detected
Chloroethane	30	Not Detected	78	Not Detected
Freon 11	7.4	Not Detected	42	Not Detected
Ethanol	37	Not Detected	70	Not Detected
Freon 113	7.4	Not Detected	57	Not Detected
1,1-Dichloroethene	7.4	Not Detected	29	Not Detected
Acetone	30	Not Detected	70	Not Detected
2-Propanol	37	Not Detected	91	Not Detected
Carbon Disulfide	30	Not Detected	92	Not Detected
3-Chloropropene	30	Not Detected	93	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.4	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.4	Not Detected	29	Not Detected
Hexane	7.4	360	26	1300
1,1-Dichloroethane	7.4	Not Detected	30	Not Detected
2-Butanone (Methyl Ethyl Ketone)	30	Not Detected	87	Not Detected
cis-1,2-Dichloroethene	7.4	Not Detected	29	Not Detected
Tetrahydrofuran	7.4	Not Detected	22	Not Detected
Chloroform	7.4	Not Detected	36	Not Detected
1,1,1-Trichloroethane	7.4	Not Detected	40	Not Detected
Cyclohexane	7.4	80	25	270
Carbon Tetrachloride	7.4	Not Detected	46	Not Detected
2,2,4-Trimethylpentane	7.4	12	34	55
Benzene	7.4	81	24	260
1,2-Dichloroethane	7.4	Not Detected	30	Not Detected
Heptane	7.4	230	30	930
Trichloroethene	7.4	Not Detected	40	Not Detected
1,2-Dichloropropane	7.4	Not Detected	34	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.4	Not Detected	50	Not Detected
cis-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
4-Methyl-2-pentanone	30	Not Detected	120	Not Detected
Toluene	7.4	Not Detected	28	Not Detected
trans-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.4	Not Detected	40	Not Detected
Tetrachloroethene	7.4	Not Detected	50	Not Detected
2-Hexanone	30	Not Detected	120	Not Detected

Client Sample ID: SGP-1

Lab ID#: 2410133A-01A

EPA METHOD TO-15 GC/MS

File Name:	14101637	Date of Collection:	9/24/24 3:00:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 12:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.4	Not Detected	63	Not Detected
1,2-Dibromoethane (EDB)	7.4	Not Detected	57	Not Detected
Chlorobenzene	7.4	7.5	34	35
Ethyl Benzene	7.4	Not Detected	32	Not Detected
m,p-Xylene	7.4	8.2	32	36
o-Xylene	7.4	Not Detected	32	Not Detected
Styrene	7.4	Not Detected	32	Not Detected
Bromoform	7.4	Not Detected	76	Not Detected
Cumene	7.4	57	36	280
1,1,2,2-Tetrachloroethane	7.4	Not Detected	51	Not Detected
Propylbenzene	7.4	37	36	180
4-Ethyltoluene	7.4	Not Detected	36	Not Detected
1,3,5-Trimethylbenzene	7.4	Not Detected	36	Not Detected
1,2,4-Trimethylbenzene	7.4	11	36	53
1,3-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,4-Dichlorobenzene	7.4	12	44	74
alpha-Chlorotoluene	7.4	Not Detected	38	Not Detected
1,2-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected
Naphthalene	30	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	100	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: SGP-2

Lab ID#: 2410133A-02A

EPA METHOD TO-15 GC/MS

File Name:	14101655	Date of Collection:	9/24/24 2:25:00 PM
Dil. Factor:	38.8	Date of Analysis:	10/17/24 11:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	190	24000	960	120000
Freon 114	190	220	1400	1500
Chloromethane	780	Not Detected	1600	Not Detected
Vinyl Chloride	190	Not Detected	500	Not Detected
1,3-Butadiene	190	Not Detected	430	Not Detected
Bromomethane	780	Not Detected	3000	Not Detected
Chloroethane	780	Not Detected	2000	Not Detected
Freon 11	190	Not Detected	1100	Not Detected
Ethanol	970	Not Detected	1800	Not Detected
Freon 113	190	Not Detected	1500	Not Detected
1,1-Dichloroethene	190	Not Detected	770	Not Detected
Acetone	780	Not Detected	1800	Not Detected
2-Propanol	970	Not Detected	2400	Not Detected
Carbon Disulfide	780	Not Detected	2400	Not Detected
3-Chloropropene	780	Not Detected	2400	Not Detected
Methylene Chloride	780	Not Detected	2700	Not Detected
Methyl tert-butyl ether	190	Not Detected	700	Not Detected
trans-1,2-Dichloroethene	190	Not Detected	770	Not Detected
Hexane	190	270	680	960
1,1-Dichloroethane	190	Not Detected	780	Not Detected
2-Butanone (Methyl Ethyl Ketone)	780	Not Detected	2300	Not Detected
cis-1,2-Dichloroethene	190	Not Detected	770	Not Detected
Tetrahydrofuran	190	Not Detected	570	Not Detected
Chloroform	190	Not Detected	950	Not Detected
1,1,1-Trichloroethane	190	Not Detected	1000	Not Detected
Cyclohexane	190	310	670	1100
Carbon Tetrachloride	190	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	190	Not Detected	910	Not Detected
Benzene	190	240	620	780
1,2-Dichloroethane	190	Not Detected	780	Not Detected
Heptane	190	380	800	1600
Trichloroethene	190	Not Detected	1000	Not Detected
1,2-Dichloropropane	190	Not Detected	900	Not Detected
1,4-Dioxane	780	Not Detected	2800	Not Detected
Bromodichloromethane	190	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	190	Not Detected	880	Not Detected
4-Methyl-2-pentanone	780	Not Detected	3200	Not Detected
Toluene	190	Not Detected	730	Not Detected
trans-1,3-Dichloropropene	190	Not Detected	880	Not Detected
1,1,2-Trichloroethane	190	Not Detected	1000	Not Detected
Tetrachloroethene	190	Not Detected	1300	Not Detected
2-Hexanone	780	Not Detected	3200	Not Detected

Client Sample ID: SGP-2

Lab ID#: 2410133A-02A

EPA METHOD TO-15 GC/MS

File Name:	14101655	Date of Collection:	9/24/24 2:25:00 PM
Dil. Factor:	38.8	Date of Analysis:	10/17/24 11:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	190	Not Detected	1600	Not Detected
1,2-Dibromoethane (EDB)	190	Not Detected	1500	Not Detected
Chlorobenzene	190	Not Detected	890	Not Detected
Ethyl Benzene	190	Not Detected	840	Not Detected
m,p-Xylene	190	Not Detected	840	Not Detected
o-Xylene	190	Not Detected	840	Not Detected
Styrene	190	Not Detected	830	Not Detected
Bromoform	190	Not Detected	2000	Not Detected
Cumene	190	Not Detected	950	Not Detected
1,1,2,2-Tetrachloroethane	190	Not Detected	1300	Not Detected
Propylbenzene	190	Not Detected	950	Not Detected
4-Ethyltoluene	190	Not Detected	950	Not Detected
1,3,5-Trimethylbenzene	190	Not Detected	950	Not Detected
1,2,4-Trimethylbenzene	190	Not Detected	950	Not Detected
1,3-Dichlorobenzene	190	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	190	Not Detected	1200	Not Detected
alpha-Chlorotoluene	190	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	190	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	780	Not Detected	5800	Not Detected
Hexachlorobutadiene	780	Not Detected	8300	Not Detected
Naphthalene	780	Not Detected	4100	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: SGP-3

Lab ID#: 2410133A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101407	Date of Collection:	9/24/24 3:20:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/14/24 12:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.72	31	3.6	150
Freon 114	0.72	100	5.0	710
Chloromethane	7.2	Not Detected	15	Not Detected
Vinyl Chloride	0.72	Not Detected	1.8	Not Detected
1,3-Butadiene	0.72	Not Detected	1.6	Not Detected
Bromomethane	7.2	Not Detected	28	Not Detected
Chloroethane	2.9	Not Detected	7.6	Not Detected
Freon 11	0.72	Not Detected	4.0	Not Detected
Ethanol	7.2	Not Detected	14	Not Detected
Freon 113	0.72	Not Detected	5.5	Not Detected
1,1-Dichloroethene	0.72	Not Detected	2.8	Not Detected
Acetone	7.2	41	17	98
2-Propanol	2.9	3.9	7.1	9.7
Carbon Disulfide	2.9	6.0	9.0	19
3-Chloropropene	2.9	Not Detected	9.0	Not Detected
Methylene Chloride	7.2	Not Detected	25	Not Detected
Methyl tert-butyl ether	2.9	Not Detected	10	Not Detected
trans-1,2-Dichloroethene	0.72	Not Detected	2.8	Not Detected
Hexane	0.72	2.0	2.5	7.2
1,1-Dichloroethane	0.72	Not Detected	2.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.9	3.3	8.5	9.8
cis-1,2-Dichloroethene	0.72	Not Detected	2.8	Not Detected
Tetrahydrofuran	0.72	Not Detected	2.1	Not Detected
Chloroform	0.72	Not Detected	3.5	Not Detected
1,1,1-Trichloroethane	0.72	Not Detected	3.9	Not Detected
Cyclohexane	0.72	1.4	2.5	5.0
Carbon Tetrachloride	0.72	Not Detected	4.5	Not Detected
2,2,4-Trimethylpentane	0.72	3.4	3.4	16
Benzene	0.72	3.2	2.3	10
1,2-Dichloroethane	0.72	Not Detected	2.9	Not Detected
Heptane	0.72	Not Detected	3.0	Not Detected
Trichloroethene	0.72	Not Detected	3.9	Not Detected
1,2-Dichloropropane	0.72	Not Detected	3.3	Not Detected
1,4-Dioxane	2.9	Not Detected	10	Not Detected
Bromodichloromethane	0.72	Not Detected	4.8	Not Detected
cis-1,3-Dichloropropene	0.72	Not Detected	3.3	Not Detected
4-Methyl-2-pentanone	0.72	Not Detected	2.9	Not Detected
Toluene	1.4	13	5.4	50
trans-1,3-Dichloropropene	0.72	Not Detected	3.3	Not Detected
1,1,2-Trichloroethane	0.72	Not Detected	3.9	Not Detected
Tetrachloroethene	0.72	2.3	4.9	16
2-Hexanone	2.9	Not Detected	12	Not Detected

Client Sample ID: SGP-3

Lab ID#: 2410133A-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101407	Date of Collection:	9/24/24 3:20:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/14/24 12:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.72	Not Detected	6.1	Not Detected
1,2-Dibromoethane (EDB)	0.72	Not Detected	5.5	Not Detected
Chlorobenzene	0.72	Not Detected	3.3	Not Detected
Ethyl Benzene	0.72	Not Detected	3.1	Not Detected
m,p-Xylene	1.4	Not Detected	6.2	Not Detected
o-Xylene	0.72	Not Detected	3.1	Not Detected
Styrene	0.72	Not Detected	3.1	Not Detected
Bromoform	0.72	Not Detected	7.4	Not Detected
Cumene	0.72	Not Detected	3.5	Not Detected
1,1,2,2-Tetrachloroethane	0.72	Not Detected	4.9	Not Detected
Propylbenzene	0.72	Not Detected	3.5	Not Detected
4-Ethyltoluene	0.72	Not Detected	3.5	Not Detected
1,3,5-Trimethylbenzene	0.72	Not Detected	3.5	Not Detected
1,2,4-Trimethylbenzene	0.72	Not Detected	3.5	Not Detected
1,3-Dichlorobenzene	0.72	0.74	4.3	4.5
1,4-Dichlorobenzene	0.72	Not Detected	4.3	Not Detected
alpha-Chlorotoluene	0.72	Not Detected	3.7	Not Detected
1,2-Dichlorobenzene	0.72	Not Detected	4.3	Not Detected
1,2,4-Trichlorobenzene	2.9	Not Detected	21	Not Detected
Hexachlorobutadiene	2.9	Not Detected	31	Not Detected
Naphthalene	1.4	Not Detected	7.5	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: SGP-4

Lab ID#: 2410133A-04A

EPA METHOD TO-15 GC/MS

File Name:	14101638	Date of Collection:	9/24/24 3:40:00 PM
Dil. Factor:	1.45	Date of Analysis:	10/17/24 12:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.2	180	36	920
Freon 114	7.2	120	51	840
Chloromethane	29	Not Detected	60	Not Detected
Vinyl Chloride	7.2	22	18	57
1,3-Butadiene	7.2	Not Detected	16	Not Detected
Bromomethane	29	Not Detected	110	Not Detected
Chloroethane	29	Not Detected	76	Not Detected
Freon 11	7.2	Not Detected	41	Not Detected
Ethanol	36	Not Detected	68	Not Detected
Freon 113	7.2	Not Detected	56	Not Detected
1,1-Dichloroethene	7.2	Not Detected	29	Not Detected
Acetone	29	Not Detected	69	Not Detected
2-Propanol	36	Not Detected	89	Not Detected
Carbon Disulfide	29	Not Detected	90	Not Detected
3-Chloropropene	29	Not Detected	91	Not Detected
Methylene Chloride	29	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.2	Not Detected	26	Not Detected
trans-1,2-Dichloroethene	7.2	Not Detected	29	Not Detected
Hexane	7.2	350	26	1200
1,1-Dichloroethane	7.2	Not Detected	29	Not Detected
2-Butanone (Methyl Ethyl Ketone)	29	Not Detected	86	Not Detected
cis-1,2-Dichloroethene	7.2	56	29	220
Tetrahydrofuran	7.2	Not Detected	21	Not Detected
Chloroform	7.2	Not Detected	35	Not Detected
1,1,1-Trichloroethane	7.2	Not Detected	40	Not Detected
Cyclohexane	7.2	310	25	1000
Carbon Tetrachloride	7.2	Not Detected	46	Not Detected
2,2,4-Trimethylpentane	7.2	340	34	1600
Benzene	7.2	120	23	370
1,2-Dichloroethane	7.2	Not Detected	29	Not Detected
Heptane	7.2	600	30	2500
Trichloroethene	7.2	Not Detected	39	Not Detected
1,2-Dichloropropane	7.2	Not Detected	34	Not Detected
1,4-Dioxane	29	Not Detected	100	Not Detected
Bromodichloromethane	7.2	Not Detected	48	Not Detected
cis-1,3-Dichloropropene	7.2	Not Detected	33	Not Detected
4-Methyl-2-pentanone	29	Not Detected	120	Not Detected
Toluene	7.2	18	27	69
trans-1,3-Dichloropropene	7.2	Not Detected	33	Not Detected
1,1,2-Trichloroethane	7.2	Not Detected	40	Not Detected
Tetrachloroethene	7.2	Not Detected	49	Not Detected
2-Hexanone	29	Not Detected	120	Not Detected

Client Sample ID: SGP-4

Lab ID#: 2410133A-04A

EPA METHOD TO-15 GC/MS

File Name:	14101638	Date of Collection:	9/24/24 3:40:00 PM
Dil. Factor:	1.45	Date of Analysis:	10/17/24 12:41 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.2	Not Detected	62	Not Detected
1,2-Dibromoethane (EDB)	7.2	Not Detected	56	Not Detected
Chlorobenzene	7.2	16	33	74
Ethyl Benzene	7.2	280	31	1200
m,p-Xylene	7.2	1400	31	5900
o-Xylene	7.2	Not Detected	31	Not Detected
Styrene	7.2	Not Detected	31	Not Detected
Bromoform	7.2	Not Detected	75	Not Detected
Cumene	7.2	Not Detected	36	Not Detected
1,1,2,2-Tetrachloroethane	7.2	Not Detected	50	Not Detected
Propylbenzene	7.2	22	36	110
4-Ethyltoluene	7.2	19 CN	36	92 CN
1,3,5-Trimethylbenzene	7.2	12	36	61
1,2,4-Trimethylbenzene	7.2	18	36	88
1,3-Dichlorobenzene	7.2	Not Detected	44	Not Detected
1,4-Dichlorobenzene	7.2	Not Detected	44	Not Detected
alpha-Chlorotoluene	7.2	Not Detected	38	Not Detected
1,2-Dichlorobenzene	7.2	Not Detected	44	Not Detected
1,2,4-Trichlorobenzene	29	Not Detected	220	Not Detected
Hexachlorobutadiene	29	Not Detected	310	Not Detected
Naphthalene	29	Not Detected	150	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: SGP-5

Lab ID#: 2410133A-05A

EPA METHOD TO-15 GC/MS

File Name:	14101639	Date of Collection:	9/24/24 4:10:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 01:04 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	110	36	520
Freon 114	7.4	280	52	2000
Chloromethane	30	Not Detected	61	Not Detected
Vinyl Chloride	7.4	720	19	1800
1,3-Butadiene	7.4	Not Detected	16	Not Detected
Bromomethane	30	Not Detected	110	Not Detected
Chloroethane	30	290	78	780
Freon 11	7.4	Not Detected	42	Not Detected
Ethanol	37	Not Detected	70	Not Detected
Freon 113	7.4	Not Detected	57	Not Detected
1,1-Dichloroethene	7.4	84	29	330
Acetone	30	180	70	440
2-Propanol	37	Not Detected	91	Not Detected
Carbon Disulfide	30	Not Detected	92	Not Detected
3-Chloropropene	30	Not Detected	93	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.4	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.4	40	29	160
Hexane	7.4	950	26	3300
1,1-Dichloroethane	7.4	480	30	1900
2-Butanone (Methyl Ethyl Ketone)	30	Not Detected	87	Not Detected
cis-1,2-Dichloroethene	7.4	360	29	1400
Tetrahydrofuran	7.4	Not Detected	22	Not Detected
Chloroform	7.4	Not Detected	36	Not Detected
1,1,1-Trichloroethane	7.4	Not Detected	40	Not Detected
Cyclohexane	7.4	1000	25	3500
Carbon Tetrachloride	7.4	Not Detected	46	Not Detected
2,2,4-Trimethylpentane	7.4	340	34	1600
Benzene	7.4	130	24	410
1,2-Dichloroethane	7.4	Not Detected	30	Not Detected
Heptane	7.4	1100	30	4500
Trichloroethene	7.4	66	40	360
1,2-Dichloropropane	7.4	Not Detected	34	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.4	Not Detected	50	Not Detected
cis-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
4-Methyl-2-pentanone	30	Not Detected	120	Not Detected
Toluene	7.4	Not Detected	28	Not Detected
trans-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.4	Not Detected	40	Not Detected
Tetrachloroethene	7.4	15	50	100
2-Hexanone	30	Not Detected	120	Not Detected

Client Sample ID: SGP-5

Lab ID#: 2410133A-05A

EPA METHOD TO-15 GC/MS

File Name:	14101639	Date of Collection:	9/24/24 4:10:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 01:04 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.4	Not Detected	63	Not Detected
1,2-Dibromoethane (EDB)	7.4	Not Detected	57	Not Detected
Chlorobenzene	7.4	Not Detected	34	Not Detected
Ethyl Benzene	7.4	Not Detected	32	Not Detected
m,p-Xylene	7.4	10	32	45
o-Xylene	7.4	Not Detected	32	Not Detected
Styrene	7.4	Not Detected	32	Not Detected
Bromoform	7.4	Not Detected	76	Not Detected
Cumene	7.4	Not Detected	36	Not Detected
1,1,2,2-Tetrachloroethane	7.4	Not Detected	51	Not Detected
Propylbenzene	7.4	Not Detected	36	Not Detected
4-Ethyltoluene	7.4	Not Detected	36	Not Detected
1,3,5-Trimethylbenzene	7.4	Not Detected	36	Not Detected
1,2,4-Trimethylbenzene	7.4	Not Detected	36	Not Detected
1,3-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,4-Dichlorobenzene	7.4	Not Detected	44	Not Detected
alpha-Chlorotoluene	7.4	Not Detected	38	Not Detected
1,2-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected
Naphthalene	30	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	118	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: SGI-6

Lab ID#: 2410133A-06A

EPA METHOD TO-15 GC/MS

File Name:	14101657	Date of Collection:	9/24/24 4:20:00 PM
Dil. Factor:	38.8	Date of Analysis:	10/17/24 11:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	190	350	960	1700
Freon 114	190	270	1400	1900
Chloromethane	780	Not Detected	1600	Not Detected
Vinyl Chloride	190	Not Detected	500	Not Detected
1,3-Butadiene	190	Not Detected	430	Not Detected
Bromomethane	780	Not Detected	3000	Not Detected
Chloroethane	780	28000	2000	74000
Freon 11	190	Not Detected	1100	Not Detected
Ethanol	970	Not Detected	1800	Not Detected
Freon 113	190	Not Detected	1500	Not Detected
1,1-Dichloroethene	190	Not Detected	770	Not Detected
Acetone	780	Not Detected	1800	Not Detected
2-Propanol	970	Not Detected	2400	Not Detected
Carbon Disulfide	780	Not Detected	2400	Not Detected
3-Chloropropene	780	Not Detected	2400	Not Detected
Methylene Chloride	780	Not Detected	2700	Not Detected
Methyl tert-butyl ether	190	Not Detected	700	Not Detected
trans-1,2-Dichloroethene	190	Not Detected	770	Not Detected
Hexane	190	1200	680	4200
1,1-Dichloroethane	190	Not Detected	780	Not Detected
2-Butanone (Methyl Ethyl Ketone)	780	Not Detected	2300	Not Detected
cis-1,2-Dichloroethene	190	Not Detected	770	Not Detected
Tetrahydrofuran	190	Not Detected	570	Not Detected
Chloroform	190	Not Detected	950	Not Detected
1,1,1-Trichloroethane	190	Not Detected	1000	Not Detected
Cyclohexane	190	1000	670	3600
Carbon Tetrachloride	190	Not Detected	1200	Not Detected
2,2,4-Trimethylpentane	190	290	910	1300
Benzene	190	380	620	1200
1,2-Dichloroethane	190	Not Detected	780	Not Detected
Heptane	190	1400	800	5900
Trichloroethene	190	Not Detected	1000	Not Detected
1,2-Dichloropropane	190	Not Detected	900	Not Detected
1,4-Dioxane	780	Not Detected	2800	Not Detected
Bromodichloromethane	190	Not Detected	1300	Not Detected
cis-1,3-Dichloropropene	190	Not Detected	880	Not Detected
4-Methyl-2-pentanone	780	Not Detected	3200	Not Detected
Toluene	190	Not Detected	730	Not Detected
trans-1,3-Dichloropropene	190	Not Detected	880	Not Detected
1,1,2-Trichloroethane	190	Not Detected	1000	Not Detected
Tetrachloroethene	190	Not Detected	1300	Not Detected
2-Hexanone	780	Not Detected	3200	Not Detected

Client Sample ID: SGI-6

Lab ID#: 2410133A-06A

EPA METHOD TO-15 GC/MS

File Name:	14101657	Date of Collection:	9/24/24 4:20:00 PM
Dil. Factor:	38.8	Date of Analysis:	10/17/24 11:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	190	Not Detected	1600	Not Detected
1,2-Dibromoethane (EDB)	190	Not Detected	1500	Not Detected
Chlorobenzene	190	Not Detected	890	Not Detected
Ethyl Benzene	190	Not Detected	840	Not Detected
m,p-Xylene	190	Not Detected	840	Not Detected
o-Xylene	190	Not Detected	840	Not Detected
Styrene	190	Not Detected	830	Not Detected
Bromoform	190	Not Detected	2000	Not Detected
Cumene	190	Not Detected	950	Not Detected
1,1,2,2-Tetrachloroethane	190	Not Detected	1300	Not Detected
Propylbenzene	190	Not Detected	950	Not Detected
4-Ethyltoluene	190	Not Detected	950	Not Detected
1,3,5-Trimethylbenzene	190	Not Detected	950	Not Detected
1,2,4-Trimethylbenzene	190	Not Detected	950	Not Detected
1,3-Dichlorobenzene	190	Not Detected	1200	Not Detected
1,4-Dichlorobenzene	190	Not Detected	1200	Not Detected
alpha-Chlorotoluene	190	Not Detected	1000	Not Detected
1,2-Dichlorobenzene	190	Not Detected	1200	Not Detected
1,2,4-Trichlorobenzene	780	Not Detected	5800	Not Detected
Hexachlorobutadiene	780	Not Detected	8300	Not Detected
Naphthalene	780	Not Detected	4100	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SGP-7

Lab ID#: 2410133A-07A

EPA METHOD TO-15 GC/MS

File Name:	14101640	Date of Collection:	9/24/24 4:30:00 PM
Dil. Factor:	2.98	Date of Analysis:	10/17/24 02:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	15	1200	74	5700
Freon 114	15	84	100	590
Chloromethane	60	Not Detected	120	Not Detected
Vinyl Chloride	15	Not Detected	38	Not Detected
1,3-Butadiene	15	Not Detected	33	Not Detected
Bromomethane	60	Not Detected	230	Not Detected
Chloroethane	60	94	160	250
Freon 11	15	580	84	3300
Ethanol	74	Not Detected	140	Not Detected
Freon 113	15	Not Detected	110	Not Detected
1,1-Dichloroethene	15	Not Detected	59	Not Detected
Acetone	60	Not Detected	140	Not Detected
2-Propanol	74	Not Detected	180	Not Detected
Carbon Disulfide	60	Not Detected	180	Not Detected
3-Chloropropene	60	Not Detected	190	Not Detected
Methylene Chloride	60	Not Detected	210	Not Detected
Methyl tert-butyl ether	15	Not Detected	54	Not Detected
trans-1,2-Dichloroethene	15	Not Detected	59	Not Detected
Hexane	15	3600	52	13000
1,1-Dichloroethane	15	Not Detected	60	Not Detected
2-Butanone (Methyl Ethyl Ketone)	60	Not Detected	180	Not Detected
cis-1,2-Dichloroethene	15	Not Detected	59	Not Detected
Tetrahydrofuran	15	Not Detected	44	Not Detected
Chloroform	15	Not Detected	73	Not Detected
1,1,1-Trichloroethane	15	Not Detected	81	Not Detected
Cyclohexane	15	3900	51	14000
Carbon Tetrachloride	15	Not Detected	94	Not Detected
2,2,4-Trimethylpentane	15	470	70	2200
Benzene	15	1000	48	3200
1,2-Dichloroethane	15	Not Detected	60	Not Detected
Heptane	15	8900	61	36000
Trichloroethene	15	Not Detected	80	Not Detected
1,2-Dichloropropane	15	Not Detected	69	Not Detected
1,4-Dioxane	60	Not Detected	210	Not Detected
Bromodichloromethane	15	Not Detected	100	Not Detected
cis-1,3-Dichloropropene	15	Not Detected	68	Not Detected
4-Methyl-2-pentanone	60	Not Detected	240	Not Detected
Toluene	15	77	56	290
trans-1,3-Dichloropropene	15	Not Detected	68	Not Detected
1,1,2-Trichloroethane	15	Not Detected	81	Not Detected
Tetrachloroethene	15	Not Detected	100	Not Detected
2-Hexanone	60	Not Detected	240	Not Detected

Client Sample ID: SGP-7

Lab ID#: 2410133A-07A

EPA METHOD TO-15 GC/MS

File Name:	14101640	Date of Collection:	9/24/24 4:30:00 PM
Dil. Factor:	2.98	Date of Analysis:	10/17/24 02:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	15	Not Detected	130	Not Detected
1,2-Dibromoethane (EDB)	15	Not Detected	110	Not Detected
Chlorobenzene	15	Not Detected	68	Not Detected
Ethyl Benzene	15	350	65	1500
m,p-Xylene	15	1000	65	4500
o-Xylene	15	54	65	230
Styrene	15	Not Detected	63	Not Detected
Bromoform	15	Not Detected	150	Not Detected
Cumene	15	120	73	590
1,1,2,2-Tetrachloroethane	15	Not Detected	100	Not Detected
Propylbenzene	15	64	73	320
4-Ethyltoluene	15	Not Detected	73	Not Detected
1,3,5-Trimethylbenzene	15	16	73	77
1,2,4-Trimethylbenzene	15	47	73	230
1,3-Dichlorobenzene	15	Not Detected	90	Not Detected
1,4-Dichlorobenzene	15	18	90	110
alpha-Chlorotoluene	15	Not Detected	77	Not Detected
1,2-Dichlorobenzene	15	Not Detected	90	Not Detected
1,2,4-Trichlorobenzene	60	Not Detected	440	Not Detected
Hexachlorobutadiene	60	Not Detected	640	Not Detected
Naphthalene	60	Not Detected	310	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	108	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: Duplicate-1

Lab ID#: 2410133A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101408	Date of Collection:	9/24/24 12:55:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/14/24 01:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	7.1	3.3	35
Freon 114	0.68	20	4.7	140
Chloromethane	6.8	Not Detected	14	Not Detected
Vinyl Chloride	0.68	Not Detected	1.7	Not Detected
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	6.8	Not Detected	26	Not Detected
Chloroethane	2.7	Not Detected	7.1	Not Detected
Freon 11	0.68	Not Detected	3.8	Not Detected
Ethanol	6.8	Not Detected	13	Not Detected
Freon 113	0.68	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Acetone	6.8	15	16	35
2-Propanol	2.7	Not Detected	6.6	Not Detected
Carbon Disulfide	2.7	Not Detected	8.4	Not Detected
3-Chloropropene	2.7	Not Detected	8.4	Not Detected
Methylene Chloride	6.8	Not Detected	23	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.7	Not Detected
trans-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Hexane	0.68	Not Detected	2.4	Not Detected
1,1-Dichloroethane	0.68	Not Detected	2.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.7	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	Not Detected	2.3	Not Detected
Carbon Tetrachloride	0.68	Not Detected	4.2	Not Detected
2,2,4-Trimethylpentane	0.68	Not Detected	3.2	Not Detected
Benzene	0.68	0.96	2.2	3.0
1,2-Dichloroethane	0.68	Not Detected	2.7	Not Detected
Heptane	0.68	Not Detected	2.8	Not Detected
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.7	Not Detected
Bromodichloromethane	0.68	Not Detected	4.5	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	1.4	3.0	5.1	11
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

Client Sample ID: Duplicate-1

Lab ID#: 2410133A-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101408	Date of Collection:	9/24/24 12:55:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/14/24 01:04 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	Not Detected	3.1	Not Detected
Ethyl Benzene	0.68	Not Detected	2.9	Not Detected
m,p-Xylene	1.4	Not Detected	5.9	Not Detected
o-Xylene	0.68	Not Detected	2.9	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	Not Detected	3.3	Not Detected
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.6	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.0	Not Detected
1,4-Dichlorobenzene	0.68	Not Detected	4.0	Not Detected
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.0	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected
Naphthalene	1.4	Not Detected	7.1	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGP-8

Lab ID#: 2410133A-09A

EPA METHOD TO-15 GC/MS

File Name:	14101642	Date of Collection:	9/25/24 12:10:00 PM
Dil. Factor:	1.81	Date of Analysis:	10/17/24 03:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	9.0	110	45	560
Freon 114	9.0	140	63	960
Chloromethane	36	Not Detected	75	Not Detected
Vinyl Chloride	9.0	18	23	46
1,3-Butadiene	9.0	Not Detected	20	Not Detected
Bromomethane	36	Not Detected	140	Not Detected
Chloroethane	36	Not Detected	96	Not Detected
Freon 11	9.0	Not Detected	51	Not Detected
Ethanol	45	Not Detected	85	Not Detected
Freon 113	9.0	Not Detected	69	Not Detected
1,1-Dichloroethene	9.0	Not Detected	36	Not Detected
Acetone	36	Not Detected	86	Not Detected
2-Propanol	45	Not Detected	110	Not Detected
Carbon Disulfide	36	Not Detected	110	Not Detected
3-Chloropropene	36	Not Detected	110	Not Detected
Methylene Chloride	36	Not Detected	120	Not Detected
Methyl tert-butyl ether	9.0	Not Detected	33	Not Detected
trans-1,2-Dichloroethene	9.0	Not Detected	36	Not Detected
Hexane	9.0	450	32	1600
1,1-Dichloroethane	9.0	Not Detected	37	Not Detected
2-Butanone (Methyl Ethyl Ketone)	36	Not Detected	110	Not Detected
cis-1,2-Dichloroethene	9.0	Not Detected	36	Not Detected
Tetrahydrofuran	9.0	Not Detected	27	Not Detected
Chloroform	9.0	Not Detected	44	Not Detected
1,1,1-Trichloroethane	9.0	Not Detected	49	Not Detected
Cyclohexane	9.0	280	31	980
Carbon Tetrachloride	9.0	Not Detected	57	Not Detected
2,2,4-Trimethylpentane	9.0	420	42	2000
Benzene	9.0	270	29	870
1,2-Dichloroethane	9.0	Not Detected	37	Not Detected
Heptane	9.0	430	37	1800
Trichloroethene	9.0	Not Detected	49	Not Detected
1,2-Dichloropropane	9.0	Not Detected	42	Not Detected
1,4-Dioxane	36	Not Detected	130	Not Detected
Bromodichloromethane	9.0	Not Detected	61	Not Detected
cis-1,3-Dichloropropene	9.0	Not Detected	41	Not Detected
4-Methyl-2-pentanone	36	Not Detected	150	Not Detected
Toluene	9.0	14	34	51
trans-1,3-Dichloropropene	9.0	Not Detected	41	Not Detected
1,1,2-Trichloroethane	9.0	Not Detected	49	Not Detected
Tetrachloroethene	9.0	Not Detected	61	Not Detected
2-Hexanone	36	Not Detected	150	Not Detected

Client Sample ID: SGP-8

Lab ID#: 2410133A-09A

EPA METHOD TO-15 GC/MS

File Name:	14101642	Date of Collection:	9/25/24 12:10:00 PM
Dil. Factor:	1.81	Date of Analysis:	10/17/24 03:10 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	9.0	Not Detected	77	Not Detected
1,2-Dibromoethane (EDB)	9.0	Not Detected	70	Not Detected
Chlorobenzene	9.0	37	42	170
Ethyl Benzene	9.0	33	39	140
m,p-Xylene	9.0	69	39	300
o-Xylene	9.0	Not Detected	39	Not Detected
Styrene	9.0	Not Detected	38	Not Detected
Bromoform	9.0	Not Detected	94	Not Detected
Cumene	9.0	54	44	260
1,1,2,2-Tetrachloroethane	9.0	Not Detected	62	Not Detected
Propylbenzene	9.0	31	44	150
4-Ethyltoluene	9.0	Not Detected	44	Not Detected
1,3,5-Trimethylbenzene	9.0	Not Detected	44	Not Detected
1,2,4-Trimethylbenzene	9.0	Not Detected	44	Not Detected
1,3-Dichlorobenzene	9.0	Not Detected	54	Not Detected
1,4-Dichlorobenzene	9.0	9.3	54	56
alpha-Chlorotoluene	9.0	Not Detected	47	Not Detected
1,2-Dichlorobenzene	9.0	Not Detected	54	Not Detected
1,2,4-Trichlorobenzene	36	Not Detected	270	Not Detected
Hexachlorobutadiene	36	Not Detected	390	Not Detected
Naphthalene	36	Not Detected	190	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SGP-9

Lab ID#: 2410133A-10A

EPA METHOD TO-15 GC/MS

File Name:	14101643	Date of Collection:	9/25/24 1:10:00 PM
Dil. Factor:	2.79	Date of Analysis:	10/17/24 03:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	14	1600	69	7800
Freon 114	14	260	98	1800
Chloromethane	56	Not Detected	120	Not Detected
Vinyl Chloride	14	24	36	60
1,3-Butadiene	14	Not Detected	31	Not Detected
Bromomethane	56	Not Detected	220	Not Detected
Chloroethane	56	680	150	1800
Freon 11	14	Not Detected	78	Not Detected
Ethanol	70	Not Detected	130	Not Detected
Freon 113	14	Not Detected	110	Not Detected
1,1-Dichloroethene	14	Not Detected	55	Not Detected
Acetone	56	160	130	380
2-Propanol	70	Not Detected	170	Not Detected
Carbon Disulfide	56	Not Detected	170	Not Detected
3-Chloropropene	56	Not Detected	170	Not Detected
Methylene Chloride	56	Not Detected	190	Not Detected
Methyl tert-butyl ether	14	Not Detected	50	Not Detected
trans-1,2-Dichloroethene	14	Not Detected	55	Not Detected
Hexane	14	400	49	1400
1,1-Dichloroethane	14	85	56	340
2-Butanone (Methyl Ethyl Ketone)	56	Not Detected	160	Not Detected
cis-1,2-Dichloroethene	14	51	55	200
Tetrahydrofuran	14	Not Detected	41	Not Detected
Chloroform	14	Not Detected	68	Not Detected
1,1,1-Trichloroethane	14	Not Detected	76	Not Detected
Cyclohexane	14	610	48	2100
Carbon Tetrachloride	14	Not Detected	88	Not Detected
2,2,4-Trimethylpentane	14	350	65	1600
Benzene	14	640	44	2100
1,2-Dichloroethane	14	Not Detected	56	Not Detected
Heptane	14	670	57	2800
Trichloroethene	14	39	75	210
1,2-Dichloropropane	14	Not Detected	64	Not Detected
1,4-Dioxane	56	Not Detected	200	Not Detected
Bromodichloromethane	14	Not Detected	93	Not Detected
cis-1,3-Dichloropropene	14	Not Detected	63	Not Detected
4-Methyl-2-pentanone	56	Not Detected	230	Not Detected
Toluene	14	120	52	450
trans-1,3-Dichloropropene	14	Not Detected	63	Not Detected
1,1,2-Trichloroethane	14	Not Detected	76	Not Detected
Tetrachloroethene	14	36	95	240
2-Hexanone	56	Not Detected	230	Not Detected

Client Sample ID: SGP-9

Lab ID#: 2410133A-10A

EPA METHOD TO-15 GC/MS

File Name:	14101643	Date of Collection:	9/25/24 1:10:00 PM
Dil. Factor:	2.79	Date of Analysis:	10/17/24 03:42 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	14	Not Detected	120	Not Detected
1,2-Dibromoethane (EDB)	14	Not Detected	110	Not Detected
Chlorobenzene	14	44	64	200
Ethyl Benzene	14	170	60	750
m,p-Xylene	14	320	60	1400
o-Xylene	14	66	60	290
Styrene	14	Not Detected	59	Not Detected
Bromoform	14	Not Detected	140	Not Detected
Cumene	14	55	68	270
1,1,2,2-Tetrachloroethane	14	Not Detected	96	Not Detected
Propylbenzene	14	Not Detected	68	Not Detected
4-Ethyltoluene	14	Not Detected	68	Not Detected
1,3,5-Trimethylbenzene	14	15	68	76
1,2,4-Trimethylbenzene	14	16	68	76
1,3-Dichlorobenzene	14	Not Detected	84	Not Detected
1,4-Dichlorobenzene	14	Not Detected	84	Not Detected
alpha-Chlorotoluene	14	Not Detected	72	Not Detected
1,2-Dichlorobenzene	14	Not Detected	84	Not Detected
1,2,4-Trichlorobenzene	56	Not Detected	410	Not Detected
Hexachlorobutadiene	56	Not Detected	600	Not Detected
Naphthalene	56	Not Detected	290	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	100	70-130
Toluene-d8	107	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SGP-10

Lab ID#: 2410133A-11A

EPA METHOD TO-15 GC/MS

File Name:	14101660	Date of Collection:	9/25/24 3:15:00 PM
Dil. Factor:	4.80	Date of Analysis:	10/17/24 01:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	24	170	120	840
Freon 114	24	99	170	690
Chloromethane	96	Not Detected	200	Not Detected
Vinyl Chloride	24	120	61	310
1,3-Butadiene	24	Not Detected	53	Not Detected
Bromomethane	96	Not Detected	370	Not Detected
Chloroethane	96	Not Detected	250	Not Detected
Freon 11	24	Not Detected	130	Not Detected
Ethanol	120	Not Detected	230	Not Detected
Freon 113	24	Not Detected	180	Not Detected
1,1-Dichloroethene	24	Not Detected	95	Not Detected
Acetone	96	Not Detected	230	Not Detected
2-Propanol	120	Not Detected	290	Not Detected
Carbon Disulfide	96	Not Detected	300	Not Detected
3-Chloropropene	96	Not Detected	300	Not Detected
Methylene Chloride	96	Not Detected	330	Not Detected
Methyl tert-butyl ether	24	Not Detected	86	Not Detected
trans-1,2-Dichloroethene	24	31	95	120
Hexane	24	2000	84	7100
1,1-Dichloroethane	24	Not Detected	97	Not Detected
2-Butanone (Methyl Ethyl Ketone)	96	Not Detected	280	Not Detected
cis-1,2-Dichloroethene	24	190	95	750
Tetrahydrofuran	24	Not Detected	71	Not Detected
Chloroform	24	Not Detected	120	Not Detected
1,1,1-Trichloroethane	24	Not Detected	130	Not Detected
Cyclohexane	24	1800	83	6400
Carbon Tetrachloride	24	Not Detected	150	Not Detected
2,2,4-Trimethylpentane	24	210	110	980
Benzene	24	1100	77	3600
1,2-Dichloroethane	24	Not Detected	97	Not Detected
Heptane	24	5000	98	21000
Trichloroethene	24	Not Detected	130	Not Detected
1,2-Dichloropropane	24	Not Detected	110	Not Detected
1,4-Dioxane	96	Not Detected	340	Not Detected
Bromodichloromethane	24	Not Detected	160	Not Detected
cis-1,3-Dichloropropene	24	Not Detected	110	Not Detected
4-Methyl-2-pentanone	96	Not Detected	390	Not Detected
Toluene	24	200	90	740
trans-1,3-Dichloropropene	24	Not Detected	110	Not Detected
1,1,2-Trichloroethane	24	Not Detected	130	Not Detected
Tetrachloroethene	24	Not Detected	160	Not Detected
2-Hexanone	96	Not Detected	390	Not Detected

Client Sample ID: SGP-10

Lab ID#: 2410133A-11A

EPA METHOD TO-15 GC/MS

File Name:	14101660	Date of Collection:	9/25/24 3:15:00 PM
Dil. Factor:	4.80	Date of Analysis:	10/17/24 01:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	24	Not Detected	200	Not Detected
1,2-Dibromoethane (EDB)	24	Not Detected	180	Not Detected
Chlorobenzene	24	Not Detected	110	Not Detected
Ethyl Benzene	24	3300	100	14000
m,p-Xylene	24	4800	100	21000
o-Xylene	24	290	100	1300
Styrene	24	Not Detected	100	Not Detected
Bromoform	24	Not Detected	250	Not Detected
Cumene	24	160	120	760
1,1,2,2-Tetrachloroethane	24	Not Detected	160	Not Detected
Propylbenzene	24	85	120	420
4-Ethyltoluene	24	110 CN	120	540 CN
1,3,5-Trimethylbenzene	24	84	120	410
1,2,4-Trimethylbenzene	24	170	120	850
1,3-Dichlorobenzene	24	Not Detected	140	Not Detected
1,4-Dichlorobenzene	24	160	140	990
alpha-Chlorotoluene	24	Not Detected	120	Not Detected
1,2-Dichlorobenzene	24	Not Detected	140	Not Detected
1,2,4-Trichlorobenzene	96	Not Detected	710	Not Detected
Hexachlorobutadiene	96	Not Detected	1000	Not Detected
Naphthalene	96	Not Detected	500	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: SGP-11

Lab ID#: 2410133A-12A

EPA METHOD TO-15 GC/MS

File Name:	14101667	Date of Collection:	9/25/24 2:20:00 PM
Dil. Factor:	3.24	Date of Analysis:	10/17/24 04:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	16	750	80	3700
Freon 114	16	200	110	1400
Chloromethane	65	Not Detected	130	Not Detected
Vinyl Chloride	16	99	41	250
1,3-Butadiene	16	Not Detected	36	Not Detected
Bromomethane	65	Not Detected	250	Not Detected
Chloroethane	65	420	170	1100
Freon 11	16	Not Detected	91	Not Detected
Ethanol	81	Not Detected	150	Not Detected
Freon 113	16	Not Detected	120	Not Detected
1,1-Dichloroethene	16	Not Detected	64	Not Detected
Acetone	65	74	150	180
2-Propanol	81	Not Detected	200	Not Detected
Carbon Disulfide	65	Not Detected	200	Not Detected
3-Chloropropene	65	Not Detected	200	Not Detected
Methylene Chloride	65	Not Detected	220	Not Detected
Methyl tert-butyl ether	16	Not Detected	58	Not Detected
trans-1,2-Dichloroethene	16	44	64	180
Hexane	16	1600	57	5600
1,1-Dichloroethane	16	77	66	310
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected	190	Not Detected
cis-1,2-Dichloroethene	16	86	64	340
Tetrahydrofuran	16	Not Detected	48	Not Detected
Chloroform	16	Not Detected	79	Not Detected
1,1,1-Trichloroethane	16	Not Detected	88	Not Detected
Cyclohexane	16	1300	56	4500
Carbon Tetrachloride	16	Not Detected	100	Not Detected
2,2,4-Trimethylpentane	16	320	76	1500
Benzene	16	1200	52	3800
1,2-Dichloroethane	16	Not Detected	66	Not Detected
Heptane	16	4000	66	16000
Trichloroethene	16	16	87	87
1,2-Dichloropropane	16	Not Detected	75	Not Detected
1,4-Dioxane	65	Not Detected	230	Not Detected
Bromodichloromethane	16	Not Detected	110	Not Detected
cis-1,3-Dichloropropene	16	Not Detected	74	Not Detected
4-Methyl-2-pentanone	65	Not Detected	260	Not Detected
Toluene	16	44	61	160
trans-1,3-Dichloropropene	16	Not Detected	74	Not Detected
1,1,2-Trichloroethane	16	Not Detected	88	Not Detected
Tetrachloroethene	16	Not Detected	110	Not Detected
2-Hexanone	65	Not Detected	260	Not Detected

Client Sample ID: SGP-11

Lab ID#: 2410133A-12A

EPA METHOD TO-15 GC/MS

File Name:	14101667	Date of Collection:	9/25/24 2:20:00 PM
Dil. Factor:	3.24	Date of Analysis:	10/17/24 04:43 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	16	Not Detected	140	Not Detected
1,2-Dibromoethane (EDB)	16	Not Detected	120	Not Detected
Chlorobenzene	16	21	74	99
Ethyl Benzene	16	800	70	3400
m,p-Xylene	16	3300	70	14000
o-Xylene	16	570	70	2500
Styrene	16	Not Detected	69	Not Detected
Bromoform	16	Not Detected	170	Not Detected
Cumene	16	71	80	350
1,1,2,2-Tetrachloroethane	16	Not Detected	110	Not Detected
Propylbenzene	16	44	80	220
4-Ethyltoluene	16	47 CN	80	230 CN
1,3,5-Trimethylbenzene	16	31	80	150
1,2,4-Trimethylbenzene	16	72	80	350
1,3-Dichlorobenzene	16	Not Detected	97	Not Detected
1,4-Dichlorobenzene	16	17	97	100
alpha-Chlorotoluene	16	Not Detected	84	Not Detected
1,2-Dichlorobenzene	16	Not Detected	97	Not Detected
1,2,4-Trichlorobenzene	65	Not Detected	480	Not Detected
Hexachlorobutadiene	65	Not Detected	690	Not Detected
Naphthalene	65	Not Detected	340	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGI-12

Lab ID#: 2410133A-13A

EPA METHOD TO-15 GC/MS

File Name:	14101664	Date of Collection:	9/25/24 2:25:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/17/24 03:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.2	190	36	950
Freon 114	7.2	190	50	1300
Chloromethane	29	Not Detected	59	Not Detected
Vinyl Chloride	7.2	29	18	75
1,3-Butadiene	7.2	Not Detected	16	Not Detected
Bromomethane	29	Not Detected	110	Not Detected
Chloroethane	29	54	76	140
Freon 11	7.2	Not Detected	40	Not Detected
Ethanol	36	Not Detected	68	Not Detected
Freon 113	7.2	Not Detected	55	Not Detected
1,1-Dichloroethene	7.2	Not Detected	28	Not Detected
Acetone	29	650	68	1600
2-Propanol	36	44	88	110
Carbon Disulfide	29	Not Detected	90	Not Detected
3-Chloropropene	29	Not Detected	90	Not Detected
Methylene Chloride	29	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.2	Not Detected	26	Not Detected
trans-1,2-Dichloroethene	7.2	Not Detected	28	Not Detected
Hexane	7.2	410	25	1400
1,1-Dichloroethane	7.2	Not Detected	29	Not Detected
2-Butanone (Methyl Ethyl Ketone)	29	53	85	160
cis-1,2-Dichloroethene	7.2	Not Detected	28	Not Detected
Tetrahydrofuran	7.2	Not Detected	21	Not Detected
Chloroform	7.2	Not Detected	35	Not Detected
1,1,1-Trichloroethane	7.2	Not Detected	39	Not Detected
Cyclohexane	7.2	260	25	900
Carbon Tetrachloride	7.2	Not Detected	45	Not Detected
2,2,4-Trimethylpentane	7.2	320	34	1500
Benzene	7.2	680	23	2200
1,2-Dichloroethane	7.2	Not Detected	29	Not Detected
Heptane	7.2	360	30	1500
Trichloroethene	7.2	Not Detected	39	Not Detected
1,2-Dichloropropane	7.2	Not Detected	33	Not Detected
1,4-Dioxane	29	Not Detected	100	Not Detected
Bromodichloromethane	7.2	Not Detected	48	Not Detected
cis-1,3-Dichloropropene	7.2	Not Detected	33	Not Detected
4-Methyl-2-pentanone	29	Not Detected	120	Not Detected
Toluene	7.2	410	27	1500
trans-1,3-Dichloropropene	7.2	Not Detected	33	Not Detected
1,1,2-Trichloroethane	7.2	Not Detected	39	Not Detected
Tetrachloroethene	7.2	12	49	79
2-Hexanone	29	Not Detected	120	Not Detected

Client Sample ID: SGI-12

Lab ID#: 2410133A-13A

EPA METHOD TO-15 GC/MS

File Name:	14101664	Date of Collection:	9/25/24 2:25:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/17/24 03:41 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.2	Not Detected	61	Not Detected
1,2-Dibromoethane (EDB)	7.2	Not Detected	55	Not Detected
Chlorobenzene	7.2	260	33	1200
Ethyl Benzene	7.2	68	31	300
m,p-Xylene	7.2	160	31	700
o-Xylene	7.2	45	31	200
Styrene	7.2	Not Detected	31	Not Detected
Bromoform	7.2	Not Detected	74	Not Detected
Cumene	7.2	Not Detected	35	Not Detected
1,1,2,2-Tetrachloroethane	7.2	Not Detected	49	Not Detected
Propylbenzene	7.2	71	35	350
4-Ethyltoluene	7.2	Not Detected	35	Not Detected
1,3,5-Trimethylbenzene	7.2	18	35	86
1,2,4-Trimethylbenzene	7.2	29	35	140
1,3-Dichlorobenzene	7.2	Not Detected	43	Not Detected
1,4-Dichlorobenzene	7.2	8.4	43	51
alpha-Chlorotoluene	7.2	Not Detected	37	Not Detected
1,2-Dichlorobenzene	7.2	Not Detected	43	Not Detected
1,2,4-Trichlorobenzene	29	Not Detected	210	Not Detected
Hexachlorobutadiene	29	Not Detected	310	Not Detected
Naphthalene	29	Not Detected	150	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	106	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: SGP-13

Lab ID#: 2410133A-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101410	Date of Collection:	9/25/24 1:40:00 PM
Dil. Factor:	1.75	Date of Analysis:	10/14/24 02:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.88	4.3	4.3	21
Freon 114	0.88	20	6.1	140
Chloromethane	8.8	Not Detected	18	Not Detected
Vinyl Chloride	0.88	Not Detected	2.2	Not Detected
1,3-Butadiene	0.88	Not Detected	1.9	Not Detected
Bromomethane	8.8	Not Detected	34	Not Detected
Chloroethane	3.5	Not Detected	9.2	Not Detected
Freon 11	0.88	Not Detected	4.9	Not Detected
Ethanol	8.8	Not Detected	16	Not Detected
Freon 113	0.88	Not Detected	6.7	Not Detected
1,1-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Acetone	8.8	13	21	30
2-Propanol	3.5	6.4	8.6	16
Carbon Disulfide	3.5	Not Detected	11	Not Detected
3-Chloropropene	3.5	Not Detected	11	Not Detected
Methylene Chloride	8.8	Not Detected	30	Not Detected
Methyl tert-butyl ether	3.5	Not Detected	13	Not Detected
trans-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Hexane	0.88	Not Detected	3.1	Not Detected
1,1-Dichloroethane	0.88	Not Detected	3.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	3.5	Not Detected	10	Not Detected
cis-1,2-Dichloroethene	0.88	Not Detected	3.5	Not Detected
Tetrahydrofuran	0.88	Not Detected	2.6	Not Detected
Chloroform	0.88	Not Detected	4.3	Not Detected
1,1,1-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Cyclohexane	0.88	5.8	3.0	20
Carbon Tetrachloride	0.88	Not Detected	5.5	Not Detected
2,2,4-Trimethylpentane	0.88	1.7	4.1	7.9
Benzene	0.88	Not Detected	2.8	Not Detected
1,2-Dichloroethane	0.88	Not Detected	3.5	Not Detected
Heptane	0.88	Not Detected	3.6	Not Detected
Trichloroethene	0.88	2.1	4.7	11
1,2-Dichloropropane	0.88	Not Detected	4.0	Not Detected
1,4-Dioxane	3.5	Not Detected	13	Not Detected
Bromodichloromethane	0.88	Not Detected	5.9	Not Detected
cis-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected
4-Methyl-2-pentanone	0.88	Not Detected	3.6	Not Detected
Toluene	1.8	Not Detected	6.6	Not Detected
trans-1,3-Dichloropropene	0.88	Not Detected	4.0	Not Detected
1,1,2-Trichloroethane	0.88	Not Detected	4.8	Not Detected
Tetrachloroethene	0.88	2.2	5.9	15
2-Hexanone	3.5	Not Detected	14	Not Detected

Client Sample ID: SGP-13

Lab ID#: 2410133A-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101410	Date of Collection:	9/25/24 1:40:00 PM
Dil. Factor:	1.75	Date of Analysis:	10/14/24 02:57 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.88	Not Detected	7.4	Not Detected
1,2-Dibromoethane (EDB)	0.88	Not Detected	6.7	Not Detected
Chlorobenzene	0.88	Not Detected	4.0	Not Detected
Ethyl Benzene	0.88	Not Detected	3.8	Not Detected
m,p-Xylene	1.8	Not Detected	7.6	Not Detected
o-Xylene	0.88	Not Detected	3.8	Not Detected
Styrene	0.88	Not Detected	3.7	Not Detected
Bromoform	0.88	Not Detected	9.0	Not Detected
Cumene	0.88	Not Detected	4.3	Not Detected
1,1,2,2-Tetrachloroethane	0.88	Not Detected	6.0	Not Detected
Propylbenzene	0.88	Not Detected	4.3	Not Detected
4-Ethyltoluene	0.88	Not Detected	4.3	Not Detected
1,3,5-Trimethylbenzene	0.88	Not Detected	4.3	Not Detected
1,2,4-Trimethylbenzene	0.88	Not Detected	4.3	Not Detected
1,3-Dichlorobenzene	0.88	1.5	5.3	9.1
1,4-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
alpha-Chlorotoluene	0.88	Not Detected	4.5	Not Detected
1,2-Dichlorobenzene	0.88	Not Detected	5.3	Not Detected
1,2,4-Trichlorobenzene	3.5	Not Detected	26	Not Detected
Hexachlorobutadiene	3.5	Not Detected	37	Not Detected
Naphthalene	1.8	Not Detected	9.2	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	106	70-130



Air Toxics

Client Sample ID: SGP-14

Lab ID#: 2410133A-15A

EPA METHOD TO-15 GC/MS

File Name:	14101665	Date of Collection:	9/25/24 3:40:00 PM
Dil. Factor:	1.54	Date of Analysis:	10/17/24 04:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.7	190	38	950
Freon 114	7.7	240	54	1600
Chloromethane	31	Not Detected	64	Not Detected
Vinyl Chloride	7.7	38	20	98
1,3-Butadiene	7.7	Not Detected	17	Not Detected
Bromomethane	31	Not Detected	120	Not Detected
Chloroethane	31	62	81	160
Freon 11	7.7	Not Detected	43	Not Detected
Ethanol	38	Not Detected	72	Not Detected
Freon 113	7.7	Not Detected	59	Not Detected
1,1-Dichloroethene	7.7	Not Detected	30	Not Detected
Acetone	31	Not Detected	73	Not Detected
2-Propanol	38	Not Detected	95	Not Detected
Carbon Disulfide	31	Not Detected	96	Not Detected
3-Chloropropene	31	Not Detected	96	Not Detected
Methylene Chloride	31	Not Detected	110	Not Detected
Methyl tert-butyl ether	7.7	Not Detected	28	Not Detected
trans-1,2-Dichloroethene	7.7	Not Detected	30	Not Detected
Hexane	7.7	690	27	2400
1,1-Dichloroethane	7.7	Not Detected	31	Not Detected
2-Butanone (Methyl Ethyl Ketone)	31	Not Detected	91	Not Detected
cis-1,2-Dichloroethene	7.7	Not Detected	30	Not Detected
Tetrahydrofuran	7.7	42	23	120
Chloroform	7.7	Not Detected	38	Not Detected
1,1,1-Trichloroethane	7.7	Not Detected	42	Not Detected
Cyclohexane	7.7	640	26	2200
Carbon Tetrachloride	7.7	Not Detected	48	Not Detected
2,2,4-Trimethylpentane	7.7	230	36	1000
Benzene	7.7	520	24	1700
1,2-Dichloroethane	7.7	Not Detected	31	Not Detected
Heptane	7.7	1800	32	7500
Trichloroethene	7.7	Not Detected	41	Not Detected
1,2-Dichloropropane	7.7	Not Detected	36	Not Detected
1,4-Dioxane	31	Not Detected	110	Not Detected
Bromodichloromethane	7.7	Not Detected	52	Not Detected
cis-1,3-Dichloropropene	7.7	Not Detected	35	Not Detected
4-Methyl-2-pentanone	31	Not Detected	130	Not Detected
Toluene	7.7	22	29	84
trans-1,3-Dichloropropene	7.7	Not Detected	35	Not Detected
1,1,2-Trichloroethane	7.7	Not Detected	42	Not Detected
Tetrachloroethene	7.7	Not Detected	52	Not Detected
2-Hexanone	31	Not Detected	130	Not Detected

Client Sample ID: SGP-14

Lab ID#: 2410133A-15A

EPA METHOD TO-15 GC/MS

File Name:	14101665	Date of Collection:	9/25/24 3:40:00 PM
Dil. Factor:	1.54	Date of Analysis:	10/17/24 04:02 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.7	Not Detected	66	Not Detected
1,2-Dibromoethane (EDB)	7.7	Not Detected	59	Not Detected
Chlorobenzene	7.7	130	35	590
Ethyl Benzene	7.7	140	33	630
m,p-Xylene	7.7	310	33	1400
o-Xylene	7.7	20	33	85
Styrene	7.7	Not Detected	33	Not Detected
Bromoform	7.7	Not Detected	80	Not Detected
Cumene	7.7	76	38	370
1,1,2,2-Tetrachloroethane	7.7	Not Detected	53	Not Detected
Propylbenzene	7.7	49	38	240
4-Ethyltoluene	7.7	Not Detected	38	Not Detected
1,3,5-Trimethylbenzene	7.7	Not Detected	38	Not Detected
1,2,4-Trimethylbenzene	7.7	23	38	110
1,3-Dichlorobenzene	7.7	Not Detected	46	Not Detected
1,4-Dichlorobenzene	7.7	18	46	110
alpha-Chlorotoluene	7.7	Not Detected	40	Not Detected
1,2-Dichlorobenzene	7.7	Not Detected	46	Not Detected
1,2,4-Trichlorobenzene	31	Not Detected	230	Not Detected
Hexachlorobutadiene	31	Not Detected	330	Not Detected
Naphthalene	31	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	126	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: Duplicate-2

Lab ID#: 2410133A-16A

EPA METHOD TO-15 GC/MS

File Name:	14101668	Date of Collection:	9/25/24 3:05:00 PM
Dil. Factor:	3.02	Date of Analysis:	10/17/24 05:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	15	750	75	3700
Freon 114	15	200	100	1400
Chloromethane	60	Not Detected	120	Not Detected
Vinyl Chloride	15	110	38	280
1,3-Butadiene	15	Not Detected	33	Not Detected
Bromomethane	60	Not Detected	230	Not Detected
Chloroethane	60	380	160	1000
Freon 11	15	Not Detected	85	Not Detected
Ethanol	76	Not Detected	140	Not Detected
Freon 113	15	Not Detected	120	Not Detected
1,1-Dichloroethene	15	Not Detected	60	Not Detected
Acetone	60	73	140	170
2-Propanol	76	Not Detected	180	Not Detected
Carbon Disulfide	60	Not Detected	190	Not Detected
3-Chloropropene	60	Not Detected	190	Not Detected
Methylene Chloride	60	Not Detected	210	Not Detected
Methyl tert-butyl ether	15	Not Detected	54	Not Detected
trans-1,2-Dichloroethene	15	46	60	180
Hexane	15	1600	53	5600
1,1-Dichloroethane	15	81	61	330
2-Butanone (Methyl Ethyl Ketone)	60	Not Detected	180	Not Detected
cis-1,2-Dichloroethene	15	83	60	330
Tetrahydrofuran	15	Not Detected	44	Not Detected
Chloroform	15	Not Detected	74	Not Detected
1,1,1-Trichloroethane	15	Not Detected	82	Not Detected
Cyclohexane	15	1300	52	4400
Carbon Tetrachloride	15	Not Detected	95	Not Detected
2,2,4-Trimethylpentane	15	340	70	1600
Benzene	15	1200	48	3800
1,2-Dichloroethane	15	Not Detected	61	Not Detected
Heptane	15	4000	62	16000
Trichloroethene	15	16	81	86
1,2-Dichloropropane	15	Not Detected	70	Not Detected
1,4-Dioxane	60	Not Detected	220	Not Detected
Bromodichloromethane	15	Not Detected	100	Not Detected
cis-1,3-Dichloropropene	15	Not Detected	68	Not Detected
4-Methyl-2-pentanone	60	Not Detected	250	Not Detected
Toluene	15	41	57	160
trans-1,3-Dichloropropene	15	Not Detected	68	Not Detected
1,1,2-Trichloroethane	15	Not Detected	82	Not Detected
Tetrachloroethene	15	Not Detected	100	Not Detected
2-Hexanone	60	Not Detected	250	Not Detected

Client Sample ID: Duplicate-2

Lab ID#: 2410133A-16A

EPA METHOD TO-15 GC/MS

File Name:	14101668	Date of Collection:	9/25/24 3:05:00 PM
Dil. Factor:	3.02	Date of Analysis:	10/17/24 05:07 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	15	Not Detected	130	Not Detected
1,2-Dibromoethane (EDB)	15	Not Detected	120	Not Detected
Chlorobenzene	15	22	70	100
Ethyl Benzene	15	870	66	3800
m,p-Xylene	15	3600	66	16000
o-Xylene	15	610	66	2600
Styrene	15	Not Detected	64	Not Detected
Bromoform	15	Not Detected	160	Not Detected
Cumene	15	83	74	410
1,1,2,2-Tetrachloroethane	15	Not Detected	100	Not Detected
Propylbenzene	15	50	74	240
4-Ethyltoluene	15	53 CN	74	260 CN
1,3,5-Trimethylbenzene	15	35	74	170
1,2,4-Trimethylbenzene	15	81	74	400
1,3-Dichlorobenzene	15	Not Detected	91	Not Detected
1,4-Dichlorobenzene	15	20	91	120
alpha-Chlorotoluene	15	Not Detected	78	Not Detected
1,2-Dichlorobenzene	15	Not Detected	91	Not Detected
1,2,4-Trichlorobenzene	60	Not Detected	450	Not Detected
Hexachlorobutadiene	60	Not Detected	640	Not Detected
Naphthalene	60	Not Detected	320	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGI-18

Lab ID#: 2410133A-17A

EPA METHOD TO-15 GC/MS

File Name:	14101666	Date of Collection:	9/26/24 12:30:00 PM
Dil. Factor:	1.51	Date of Analysis:	10/17/24 04:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.6	100	37	500
Freon 114	7.6	120	53	870
Chloromethane	30	Not Detected	62	Not Detected
Vinyl Chloride	7.6	35	19	88
1,3-Butadiene	7.6	Not Detected	17	Not Detected
Bromomethane	30	Not Detected	120	Not Detected
Chloroethane	30	48	80	130
Freon 11	7.6	Not Detected	42	Not Detected
Ethanol	38	Not Detected	71	Not Detected
Freon 113	7.6	Not Detected	58	Not Detected
1,1-Dichloroethene	7.6	Not Detected	30	Not Detected
Acetone	30	50	72	120
2-Propanol	38	Not Detected	93	Not Detected
Carbon Disulfide	30	Not Detected	94	Not Detected
3-Chloropropene	30	Not Detected	94	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.6	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.6	Not Detected	30	Not Detected
Hexane	7.6	470	27	1600
1,1-Dichloroethane	7.6	10	30	40
2-Butanone (Methyl Ethyl Ketone)	30	Not Detected	89	Not Detected
cis-1,2-Dichloroethene	7.6	12	30	49
Tetrahydrofuran	7.6	Not Detected	22	Not Detected
Chloroform	7.6	Not Detected	37	Not Detected
1,1,1-Trichloroethane	7.6	Not Detected	41	Not Detected
Cyclohexane	7.6	200	26	700
Carbon Tetrachloride	7.6	Not Detected	48	Not Detected
2,2,4-Trimethylpentane	7.6	190	35	870
Benzene	7.6	180	24	590
1,2-Dichloroethane	7.6	Not Detected	30	Not Detected
Heptane	7.6	580	31	2400
Trichloroethene	7.6	9.7	40	52
1,2-Dichloropropane	7.6	Not Detected	35	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.6	Not Detected	50	Not Detected
cis-1,3-Dichloropropene	7.6	Not Detected	34	Not Detected
4-Methyl-2-pentanone	30	Not Detected	120	Not Detected
Toluene	7.6	55	28	210
trans-1,3-Dichloropropene	7.6	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.6	Not Detected	41	Not Detected
Tetrachloroethene	7.6	Not Detected	51	Not Detected
2-Hexanone	30	Not Detected	120	Not Detected

Client Sample ID: SGI-18

Lab ID#: 2410133A-17A

EPA METHOD TO-15 GC/MS

File Name:	14101666	Date of Collection:	9/26/24 12:30:00 PM
Dil. Factor:	1.51	Date of Analysis:	10/17/24 04:23 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.6	Not Detected	64	Not Detected
1,2-Dibromoethane (EDB)	7.6	Not Detected	58	Not Detected
Chlorobenzene	7.6	50	35	230
Ethyl Benzene	7.6	610	33	2600
m,p-Xylene	7.6	1100	33	4800
o-Xylene	7.6	29	33	130
Styrene	7.6	Not Detected	32	Not Detected
Bromoform	7.6	Not Detected	78	Not Detected
Cumene	7.6	Not Detected	37	Not Detected
1,1,2,2-Tetrachloroethane	7.6	Not Detected	52	Not Detected
Propylbenzene	7.6	48	37	240
4-Ethyltoluene	7.6	57 CN	37	280 CN
1,3,5-Trimethylbenzene	7.6	58	37	290
1,2,4-Trimethylbenzene	7.6	86	37	420
1,3-Dichlorobenzene	7.6	Not Detected	45	Not Detected
1,4-Dichlorobenzene	7.6	Not Detected	45	Not Detected
alpha-Chlorotoluene	7.6	Not Detected	39	Not Detected
1,2-Dichlorobenzene	7.6	Not Detected	45	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected
Naphthalene	30	Not Detected	160	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	105	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: SGP-19

Lab ID#: 2410133A-18A

EPA METHOD TO-15 GC/MS

File Name:	14101662	Date of Collection:	9/26/24 1:15:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 02:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.4	390	36	1900
Freon 114	7.4	60	52	420
Chloromethane	30	Not Detected	61	Not Detected
Vinyl Chloride	7.4	21	19	53
1,3-Butadiene	7.4	Not Detected	16	Not Detected
Bromomethane	30	Not Detected	110	Not Detected
Chloroethane	30	85	78	220
Freon 11	7.4	Not Detected	42	Not Detected
Ethanol	37	Not Detected	70	Not Detected
Freon 113	7.4	Not Detected	57	Not Detected
1,1-Dichloroethene	7.4	Not Detected	29	Not Detected
Acetone	30	140	70	320
2-Propanol	37	Not Detected	91	Not Detected
Carbon Disulfide	30	Not Detected	92	Not Detected
3-Chloropropene	30	Not Detected	93	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.4	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.4	Not Detected	29	Not Detected
Hexane	7.4	970	26	3400
1,1-Dichloroethane	7.4	Not Detected	30	Not Detected
2-Butanone (Methyl Ethyl Ketone)	30	Not Detected	87	Not Detected
cis-1,2-Dichloroethene	7.4	14	29	54
Tetrahydrofuran	7.4	Not Detected	22	Not Detected
Chloroform	7.4	Not Detected	36	Not Detected
1,1,1-Trichloroethane	7.4	Not Detected	40	Not Detected
Cyclohexane	7.4	580	25	2000
Carbon Tetrachloride	7.4	Not Detected	46	Not Detected
2,2,4-Trimethylpentane	7.4	190	34	900
Benzene	7.4	220	24	700
1,2-Dichloroethane	7.4	Not Detected	30	Not Detected
Heptane	7.4	1200	30	4900
Trichloroethene	7.4	16	40	85
1,2-Dichloropropane	7.4	Not Detected	34	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.4	Not Detected	50	Not Detected
cis-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
4-Methyl-2-pentanone	30	Not Detected	120	Not Detected
Toluene	7.4	230	28	880
trans-1,3-Dichloropropene	7.4	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.4	Not Detected	40	Not Detected
Tetrachloroethene	7.4	Not Detected	50	Not Detected
2-Hexanone	30	Not Detected	120	Not Detected



Air Toxics

Client Sample ID: SGP-19

Lab ID#: 2410133A-18A

EPA METHOD TO-15 GC/MS

File Name:	14101662	Date of Collection:	9/26/24 1:15:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/17/24 02:42 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.4	Not Detected	63	Not Detected
1,2-Dibromoethane (EDB)	7.4	Not Detected	57	Not Detected
Chlorobenzene	7.4	310	34	1400
Ethyl Benzene	7.4	130	32	550
m,p-Xylene	7.4	600	32	2600
o-Xylene	7.4	73	32	320
Styrene	7.4	Not Detected	32	Not Detected
Bromoform	7.4	Not Detected	76	Not Detected
Cumene	7.4	99	36	490
1,1,2,2-Tetrachloroethane	7.4	Not Detected	51	Not Detected
Propylbenzene	7.4	60	36	300
4-Ethyltoluene	7.4	54 CN	36	260 CN
1,3,5-Trimethylbenzene	7.4	32	36	160
1,2,4-Trimethylbenzene	7.4	53	36	260
1,3-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,4-Dichlorobenzene	7.4	12	44	75
alpha-Chlorotoluene	7.4	Not Detected	38	Not Detected
1,2-Dichlorobenzene	7.4	Not Detected	44	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected
Naphthalene	30	Not Detected	160	Not Detected

CN =See Case Narrative explanation

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	109	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: SGP-20

Lab ID#: 2410133A-19A

EPA METHOD TO-15 GC/MS

File Name:	14101663	Date of Collection:	9/26/24 1:50:00 PM
Dil. Factor:	1.50	Date of Analysis:	10/17/24 03:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.5	16	37	77
Freon 114	7.5	61	52	420
Chloromethane	30	Not Detected	62	Not Detected
Vinyl Chloride	7.5	37	19	94
1,3-Butadiene	7.5	Not Detected	16	Not Detected
Bromomethane	30	Not Detected	120	Not Detected
Chloroethane	30	Not Detected	79	Not Detected
Freon 11	7.5	Not Detected	42	Not Detected
Ethanol	38	Not Detected	71	Not Detected
Freon 113	7.5	Not Detected	57	Not Detected
1,1-Dichloroethene	7.5	Not Detected	30	Not Detected
Acetone	30	51	71	120
2-Propanol	38	Not Detected	92	Not Detected
Carbon Disulfide	30	Not Detected	93	Not Detected
3-Chloropropene	30	Not Detected	94	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	7.5	Not Detected	27	Not Detected
trans-1,2-Dichloroethene	7.5	Not Detected	30	Not Detected
Hexane	7.5	580	26	2000
1,1-Dichloroethane	7.5	Not Detected	30	Not Detected
2-Butanone (Methyl Ethyl Ketone)	30	Not Detected	88	Not Detected
cis-1,2-Dichloroethene	7.5	8.9	30	35
Tetrahydrofuran	7.5	Not Detected	22	Not Detected
Chloroform	7.5	Not Detected	37	Not Detected
1,1,1-Trichloroethane	7.5	Not Detected	41	Not Detected
Cyclohexane	7.5	890	26	3100
Carbon Tetrachloride	7.5	Not Detected	47	Not Detected
2,2,4-Trimethylpentane	7.5	180	35	870
Benzene	7.5	240	24	770
1,2-Dichloroethane	7.5	Not Detected	30	Not Detected
Heptane	7.5	590	31	2400
Trichloroethene	7.5	Not Detected	40	Not Detected
1,2-Dichloropropane	7.5	Not Detected	35	Not Detected
1,4-Dioxane	30	Not Detected	110	Not Detected
Bromodichloromethane	7.5	Not Detected	50	Not Detected
cis-1,3-Dichloropropene	7.5	Not Detected	34	Not Detected
4-Methyl-2-pentanone	30	Not Detected	120	Not Detected
Toluene	7.5	8.6	28	32
trans-1,3-Dichloropropene	7.5	Not Detected	34	Not Detected
1,1,2-Trichloroethane	7.5	Not Detected	41	Not Detected
Tetrachloroethene	7.5	Not Detected	51	Not Detected
2-Hexanone	30	Not Detected	120	Not Detected

Client Sample ID: SGP-20

Lab ID#: 2410133A-19A

EPA METHOD TO-15 GC/MS

File Name:	14101663	Date of Collection:	9/26/24 1:50:00 PM
Dil. Factor:	1.50	Date of Analysis:	10/17/24 03:20 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.5	Not Detected	64	Not Detected
1,2-Dibromoethane (EDB)	7.5	Not Detected	58	Not Detected
Chlorobenzene	7.5	170	34	780
Ethyl Benzene	7.5	7.9	32	34
m,p-Xylene	7.5	17	32	74
o-Xylene	7.5	9.3	32	40
Styrene	7.5	Not Detected	32	Not Detected
Bromoform	7.5	Not Detected	78	Not Detected
Cumene	7.5	17	37	84
1,1,2,2-Tetrachloroethane	7.5	Not Detected	51	Not Detected
Propylbenzene	7.5	Not Detected	37	Not Detected
4-Ethyltoluene	7.5	Not Detected	37	Not Detected
1,3,5-Trimethylbenzene	7.5	Not Detected	37	Not Detected
1,2,4-Trimethylbenzene	7.5	Not Detected	37	Not Detected
1,3-Dichlorobenzene	7.5	Not Detected	45	Not Detected
1,4-Dichlorobenzene	7.5	Not Detected	45	Not Detected
alpha-Chlorotoluene	7.5	Not Detected	39	Not Detected
1,2-Dichlorobenzene	7.5	Not Detected	45	Not Detected
1,2,4-Trichlorobenzene	30	Not Detected	220	Not Detected
Hexachlorobutadiene	30	Not Detected	320	Not Detected
Naphthalene	30	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	117	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGP-27

Lab ID#: 2410133A-20A

EPA METHOD TO-15 GC/MS

File Name:	14101653	Date of Collection:	9/26/24 2:40:00 PM
Dil. Factor:	5.12	Date of Analysis:	10/17/24 10:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	26	4000	130	20000
Freon 114	26	45	180	320
Chloromethane	100	Not Detected	210	Not Detected
Vinyl Chloride	26	250	65	640
1,3-Butadiene	26	Not Detected	57	Not Detected
Bromomethane	100	Not Detected	400	Not Detected
Chloroethane	100	Not Detected	270	Not Detected
Freon 11	26	Not Detected	140	Not Detected
Ethanol	130	Not Detected	240	Not Detected
Freon 113	26	Not Detected	200	Not Detected
1,1-Dichloroethene	26	Not Detected	100	Not Detected
Acetone	100	Not Detected	240	Not Detected
2-Propanol	130	Not Detected	310	Not Detected
Carbon Disulfide	100	Not Detected	320	Not Detected
3-Chloropropene	100	Not Detected	320	Not Detected
Methylene Chloride	100	Not Detected	360	Not Detected
Methyl tert-butyl ether	26	Not Detected	92	Not Detected
trans-1,2-Dichloroethene	26	Not Detected	100	Not Detected
Hexane	26	150	90	540
1,1-Dichloroethane	26	Not Detected	100	Not Detected
2-Butanone (Methyl Ethyl Ketone)	100	Not Detected	300	Not Detected
cis-1,2-Dichloroethene	26	Not Detected	100	Not Detected
Tetrahydrofuran	26	Not Detected	75	Not Detected
Chloroform	26	Not Detected	120	Not Detected
1,1,1-Trichloroethane	26	Not Detected	140	Not Detected
Cyclohexane	26	80	88	280
Carbon Tetrachloride	26	Not Detected	160	Not Detected
2,2,4-Trimethylpentane	26	66	120	310
Benzene	26	130	82	420
1,2-Dichloroethane	26	Not Detected	100	Not Detected
Heptane	26	120	100	490
Trichloroethene	26	Not Detected	140	Not Detected
1,2-Dichloropropane	26	Not Detected	120	Not Detected
1,4-Dioxane	100	Not Detected	370	Not Detected
Bromodichloromethane	26	Not Detected	170	Not Detected
cis-1,3-Dichloropropene	26	Not Detected	120	Not Detected
4-Methyl-2-pentanone	100	Not Detected	420	Not Detected
Toluene	26	Not Detected	96	Not Detected
trans-1,3-Dichloropropene	26	Not Detected	120	Not Detected
1,1,2-Trichloroethane	26	Not Detected	140	Not Detected
Tetrachloroethene	26	Not Detected	170	Not Detected
2-Hexanone	100	Not Detected	420	Not Detected

Client Sample ID: SGP-27

Lab ID#: 2410133A-20A

EPA METHOD TO-15 GC/MS

File Name:	14101653	Date of Collection:	9/26/24 2:40:00 PM
Dil. Factor:	5.12	Date of Analysis:	10/17/24 10:00 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	26	Not Detected	220	Not Detected
1,2-Dibromoethane (EDB)	26	Not Detected	200	Not Detected
Chlorobenzene	26	90	120	420
Ethyl Benzene	26	Not Detected	110	Not Detected
m,p-Xylene	26	45	110	190
o-Xylene	26	Not Detected	110	Not Detected
Styrene	26	Not Detected	110	Not Detected
Bromoform	26	Not Detected	260	Not Detected
Cumene	26	69	120	340
1,1,2,2-Tetrachloroethane	26	Not Detected	180	Not Detected
Propylbenzene	26	33	120	160
4-Ethyltoluene	26	Not Detected	120	Not Detected
1,3,5-Trimethylbenzene	26	Not Detected	120	Not Detected
1,2,4-Trimethylbenzene	26	Not Detected	120	Not Detected
1,3-Dichlorobenzene	26	Not Detected	150	Not Detected
1,4-Dichlorobenzene	26	Not Detected	150	Not Detected
alpha-Chlorotoluene	26	Not Detected	130	Not Detected
1,2-Dichlorobenzene	26	Not Detected	150	Not Detected
1,2,4-Trichlorobenzene	100	Not Detected	760	Not Detected
Hexachlorobutadiene	100	Not Detected	1100	Not Detected
Naphthalene	100	Not Detected	540	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: SGP-28

Lab ID#: 2410133A-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101718	Date of Collection:	9/26/24 3:00:00 PM
Dil. Factor:	5.91	Date of Analysis:	10/17/24 06:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	3.0	4.6	15	23
Freon 114	3.0	80	21	560
Chloromethane	30	Not Detected	61	Not Detected
Vinyl Chloride	3.0	Not Detected	7.6	Not Detected
1,3-Butadiene	3.0	Not Detected	6.5	Not Detected
Bromomethane	30	Not Detected	110	Not Detected
Chloroethane	12	Not Detected	31	Not Detected
Freon 11	3.0	Not Detected	17	Not Detected
Ethanol	30	Not Detected	56	Not Detected
Freon 113	3.0	Not Detected	23	Not Detected
1,1-Dichloroethene	3.0	Not Detected	12	Not Detected
Acetone	30	Not Detected	70	Not Detected
2-Propanol	12	Not Detected	29	Not Detected
Carbon Disulfide	12	Not Detected	37	Not Detected
3-Chloropropene	12	Not Detected	37	Not Detected
Methylene Chloride	30	Not Detected	100	Not Detected
Methyl tert-butyl ether	12	Not Detected	43	Not Detected
trans-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
Hexane	3.0	72	10	260
1,1-Dichloroethane	3.0	Not Detected	12	Not Detected
2-Butanone (Methyl Ethyl Ketone)	12	Not Detected	35	Not Detected
cis-1,2-Dichloroethene	3.0	Not Detected	12	Not Detected
Tetrahydrofuran	3.0	Not Detected	8.7	Not Detected
Chloroform	3.0	Not Detected	14	Not Detected
1,1,1-Trichloroethane	3.0	Not Detected	16	Not Detected
Cyclohexane	3.0	35	10	120
Carbon Tetrachloride	3.0	Not Detected	18	Not Detected
2,2,4-Trimethylpentane	3.0	15	14	69
Benzene	3.0	75	9.4	240
1,2-Dichloroethane	3.0	Not Detected	12	Not Detected
Heptane	3.0	40	12	160
Trichloroethene	3.0	Not Detected	16	Not Detected
1,2-Dichloropropane	3.0	Not Detected	14	Not Detected
1,4-Dioxane	12	Not Detected	42	Not Detected
Bromodichloromethane	3.0	Not Detected	20	Not Detected
cis-1,3-Dichloropropene	3.0	Not Detected	13	Not Detected
4-Methyl-2-pentanone	3.0	Not Detected	12	Not Detected
Toluene	5.9	19	22	72
trans-1,3-Dichloropropene	3.0	Not Detected	13	Not Detected
1,1,2-Trichloroethane	3.0	Not Detected	16	Not Detected
Tetrachloroethene	3.0	Not Detected	20	Not Detected
2-Hexanone	12	Not Detected	48	Not Detected

Client Sample ID: SGP-28

Lab ID#: 2410133A-21A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101718	Date of Collection:	9/26/24 3:00:00 PM
Dil. Factor:	5.91	Date of Analysis:	10/17/24 06:50 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	3.0	Not Detected	25	Not Detected
1,2-Dibromoethane (EDB)	3.0	Not Detected	23	Not Detected
Chlorobenzene	3.0	660	14	3000
Ethyl Benzene	3.0	8.9	13	38
m,p-Xylene	5.9	Not Detected	26	Not Detected
o-Xylene	3.0	Not Detected	13	Not Detected
Styrene	3.0	4.4	12	19
Bromoform	3.0	Not Detected	30	Not Detected
Cumene	3.0	20	14	96
1,1,2,2-Tetrachloroethane	3.0	Not Detected	20	Not Detected
Propylbenzene	3.0	6.0	14	30
4-Ethyltoluene	3.0	Not Detected	14	Not Detected
1,3,5-Trimethylbenzene	3.0	Not Detected	14	Not Detected
1,2,4-Trimethylbenzene	3.0	Not Detected	14	Not Detected
1,3-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,4-Dichlorobenzene	3.0	5.0	18	30
alpha-Chlorotoluene	3.0	Not Detected	15	Not Detected
1,2-Dichlorobenzene	3.0	Not Detected	18	Not Detected
1,2,4-Trichlorobenzene	12	Not Detected	88	Not Detected
Hexachlorobutadiene	12	Not Detected	130	Not Detected
Naphthalene	5.9	Not Detected	31	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	113	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: SGP-24

Lab ID#: 2410133A-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101719	Date of Collection:	9/26/24 2:10:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/17/24 07:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.68	5.1	3.3	25
Freon 114	0.68	27	4.7	190
Chloromethane	6.8	Not Detected	14	Not Detected
Vinyl Chloride	0.68	Not Detected	1.7	Not Detected
1,3-Butadiene	0.68	Not Detected	1.5	Not Detected
Bromomethane	6.8	Not Detected	26	Not Detected
Chloroethane	2.7	66	7.1	170
Freon 11	0.68	Not Detected	3.8	Not Detected
Ethanol	6.8	23	13	43
Freon 113	0.68	Not Detected	5.2	Not Detected
1,1-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Acetone	6.8	11	16	27
2-Propanol	2.7	6.6	6.6	16
Carbon Disulfide	2.7	2.9	8.4	9.0
3-Chloropropene	2.7	Not Detected	8.4	Not Detected
Methylene Chloride	6.8	Not Detected	23	Not Detected
Methyl tert-butyl ether	2.7	Not Detected	9.7	Not Detected
trans-1,2-Dichloroethene	0.68	Not Detected	2.7	Not Detected
Hexane	0.68	240	2.4	830
1,1-Dichloroethane	0.68	1.3	2.7	5.2
2-Butanone (Methyl Ethyl Ketone)	2.7	Not Detected	8.0	Not Detected
cis-1,2-Dichloroethene	0.68	0.91	2.7	3.6
Tetrahydrofuran	0.68	Not Detected	2.0	Not Detected
Chloroform	0.68	Not Detected	3.3	Not Detected
1,1,1-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Cyclohexane	0.68	96	2.3	330
Carbon Tetrachloride	0.68	Not Detected	4.2	Not Detected
2,2,4-Trimethylpentane	0.68	41	3.2	190
Benzene	0.68	26	2.2	84
1,2-Dichloroethane	0.68	Not Detected	2.7	Not Detected
Heptane	0.68	61	2.8	250
Trichloroethene	0.68	Not Detected	3.6	Not Detected
1,2-Dichloropropane	0.68	Not Detected	3.1	Not Detected
1,4-Dioxane	2.7	Not Detected	9.7	Not Detected
Bromodichloromethane	0.68	Not Detected	4.5	Not Detected
cis-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
4-Methyl-2-pentanone	0.68	Not Detected	2.8	Not Detected
Toluene	1.4	3.8	5.1	14
trans-1,3-Dichloropropene	0.68	Not Detected	3.1	Not Detected
1,1,2-Trichloroethane	0.68	Not Detected	3.7	Not Detected
Tetrachloroethene	0.68	Not Detected	4.6	Not Detected
2-Hexanone	2.7	Not Detected	11	Not Detected

Client Sample ID: SGP-24

Lab ID#: 2410133A-22A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101719	Date of Collection:	9/26/24 2:10:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/17/24 07:21 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.68	Not Detected	5.8	Not Detected
1,2-Dibromoethane (EDB)	0.68	Not Detected	5.2	Not Detected
Chlorobenzene	0.68	12	3.1	55
Ethyl Benzene	0.68	Not Detected	2.9	Not Detected
m,p-Xylene	1.4	Not Detected	5.9	Not Detected
o-Xylene	0.68	Not Detected	2.9	Not Detected
Styrene	0.68	Not Detected	2.9	Not Detected
Bromoform	0.68	Not Detected	7.0	Not Detected
Cumene	0.68	3.4	3.3	17
1,1,2,2-Tetrachloroethane	0.68	Not Detected	4.6	Not Detected
Propylbenzene	0.68	Not Detected	3.3	Not Detected
4-Ethyltoluene	0.68	Not Detected	3.3	Not Detected
1,3,5-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,2,4-Trimethylbenzene	0.68	Not Detected	3.3	Not Detected
1,3-Dichlorobenzene	0.68	Not Detected	4.0	Not Detected
1,4-Dichlorobenzene	0.68	1.1	4.0	6.8
alpha-Chlorotoluene	0.68	Not Detected	3.5	Not Detected
1,2-Dichlorobenzene	0.68	Not Detected	4.0	Not Detected
1,2,4-Trichlorobenzene	2.7	Not Detected	20	Not Detected
Hexachlorobutadiene	2.7	Not Detected	29	Not Detected
Naphthalene	1.4	Not Detected	7.1	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: Duplicate-3

Lab ID#: 2410133A-23A

EPA METHOD TO-15 GC/MS

File Name:	14101645	Date of Collection:	9/26/24
Dil. Factor:	2.86	Date of Analysis:	10/17/24 04:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	14	17	71	85
Freon 114	14	66	100	460
Chloromethane	57	Not Detected	120	Not Detected
Vinyl Chloride	14	40	36	100
1,3-Butadiene	14	Not Detected	32	Not Detected
Bromomethane	57	Not Detected	220	Not Detected
Chloroethane	57	Not Detected	150	Not Detected
Freon 11	14	Not Detected	80	Not Detected
Ethanol	72	Not Detected	130	Not Detected
Freon 113	14	Not Detected	110	Not Detected
1,1-Dichloroethene	14	Not Detected	57	Not Detected
Acetone	57	Not Detected	140	Not Detected
2-Propanol	72	Not Detected	180	Not Detected
Carbon Disulfide	57	Not Detected	180	Not Detected
3-Chloropropene	57	Not Detected	180	Not Detected
Methylene Chloride	57	Not Detected	200	Not Detected
Methyl tert-butyl ether	14	Not Detected	52	Not Detected
trans-1,2-Dichloroethene	14	Not Detected	57	Not Detected
Hexane	14	630	50	2200
1,1-Dichloroethane	14	Not Detected	58	Not Detected
2-Butanone (Methyl Ethyl Ketone)	57	Not Detected	170	Not Detected
cis-1,2-Dichloroethene	14	Not Detected	57	Not Detected
Tetrahydrofuran	14	Not Detected	42	Not Detected
Chloroform	14	Not Detected	70	Not Detected
1,1,1-Trichloroethane	14	Not Detected	78	Not Detected
Cyclohexane	14	950	49	3300
Carbon Tetrachloride	14	Not Detected	90	Not Detected
2,2,4-Trimethylpentane	14	200	67	940
Benzene	14	270	46	860
1,2-Dichloroethane	14	Not Detected	58	Not Detected
Heptane	14	640	59	2600
Trichloroethene	14	Not Detected	77	Not Detected
1,2-Dichloropropane	14	Not Detected	66	Not Detected
1,4-Dioxane	57	Not Detected	210	Not Detected
Bromodichloromethane	14	Not Detected	96	Not Detected
cis-1,3-Dichloropropene	14	Not Detected	65	Not Detected
4-Methyl-2-pentanone	57	Not Detected	230	Not Detected
Toluene	14	Not Detected	54	Not Detected
trans-1,3-Dichloropropene	14	Not Detected	65	Not Detected
1,1,2-Trichloroethane	14	Not Detected	78	Not Detected
Tetrachloroethene	14	Not Detected	97	Not Detected
2-Hexanone	57	Not Detected	230	Not Detected

Client Sample ID: Duplicate-3

Lab ID#: 2410133A-23A

EPA METHOD TO-15 GC/MS

File Name:	14101645	Date of Collection:	9/26/24
Dil. Factor:	2.86	Date of Analysis:	10/17/24 04:29 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	14	Not Detected	120	Not Detected
1,2-Dibromoethane (EDB)	14	Not Detected	110	Not Detected
Chlorobenzene	14	200	66	910
Ethyl Benzene	14	Not Detected	62	Not Detected
m,p-Xylene	14	20	62	88
o-Xylene	14	Not Detected	62	Not Detected
Styrene	14	Not Detected	61	Not Detected
Bromoform	14	Not Detected	150	Not Detected
Cumene	14	21	70	100
1,1,2,2-Tetrachloroethane	14	Not Detected	98	Not Detected
Propylbenzene	14	Not Detected	70	Not Detected
4-Ethyltoluene	14	Not Detected	70	Not Detected
1,3,5-Trimethylbenzene	14	Not Detected	70	Not Detected
1,2,4-Trimethylbenzene	14	Not Detected	70	Not Detected
1,3-Dichlorobenzene	14	Not Detected	86	Not Detected
1,4-Dichlorobenzene	14	Not Detected	86	Not Detected
alpha-Chlorotoluene	14	Not Detected	74	Not Detected
1,2-Dichlorobenzene	14	Not Detected	86	Not Detected
1,2,4-Trichlorobenzene	57	Not Detected	420	Not Detected
Hexachlorobutadiene	57	Not Detected	610	Not Detected
Naphthalene	57	Not Detected	300	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	103	70-130



Air Toxics

Client Sample ID: SGI-26

Lab ID#: 2410133A-24A

EPA METHOD TO-15 GC/MS

File Name:	14101646	Date of Collection:	9/30/24 12:15:00 PM
Dil. Factor:	3.25	Date of Analysis:	10/17/24 04:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	16	Not Detected	80	Not Detected
Freon 114	16	39	110	270
Chloromethane	65	Not Detected	130	Not Detected
Vinyl Chloride	16	30	42	76
1,3-Butadiene	16	Not Detected	36	Not Detected
Bromomethane	65	Not Detected	250	Not Detected
Chloroethane	65	92	170	240
Freon 11	16	Not Detected	91	Not Detected
Ethanol	81	Not Detected	150	Not Detected
Freon 113	16	Not Detected	120	Not Detected
1,1-Dichloroethene	16	Not Detected	64	Not Detected
Acetone	65	Not Detected	150	Not Detected
2-Propanol	81	Not Detected	200	Not Detected
Carbon Disulfide	65	Not Detected	200	Not Detected
3-Chloropropene	65	Not Detected	200	Not Detected
Methylene Chloride	65	Not Detected	220	Not Detected
Methyl tert-butyl ether	16	Not Detected	58	Not Detected
trans-1,2-Dichloroethene	16	Not Detected	64	Not Detected
Hexane	16	440	57	1600
1,1-Dichloroethane	16	Not Detected	66	Not Detected
2-Butanone (Methyl Ethyl Ketone)	65	Not Detected	190	Not Detected
cis-1,2-Dichloroethene	16	Not Detected	64	Not Detected
Tetrahydrofuran	16	Not Detected	48	Not Detected
Chloroform	16	Not Detected	79	Not Detected
1,1,1-Trichloroethane	16	Not Detected	89	Not Detected
Cyclohexane	16	190	56	660
Carbon Tetrachloride	16	Not Detected	100	Not Detected
2,2,4-Trimethylpentane	16	71	76	330
Benzene	16	180	52	580
1,2-Dichloroethane	16	Not Detected	66	Not Detected
Heptane	16	80	66	330
Trichloroethene	16	Not Detected	87	Not Detected
1,2-Dichloropropane	16	Not Detected	75	Not Detected
1,4-Dioxane	65	Not Detected	230	Not Detected
Bromodichloromethane	16	Not Detected	110	Not Detected
cis-1,3-Dichloropropene	16	Not Detected	74	Not Detected
4-Methyl-2-pentanone	65	Not Detected	270	Not Detected
Toluene	16	17	61	64
trans-1,3-Dichloropropene	16	Not Detected	74	Not Detected
1,1,2-Trichloroethane	16	Not Detected	89	Not Detected
Tetrachloroethene	16	Not Detected	110	Not Detected
2-Hexanone	65	Not Detected	270	Not Detected

Client Sample ID: SGI-26

Lab ID#: 2410133A-24A

EPA METHOD TO-15 GC/MS

File Name:	14101646	Date of Collection:	9/30/24 12:15:00 PM
Dil. Factor:	3.25	Date of Analysis:	10/17/24 04:52 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	16	Not Detected	140	Not Detected
1,2-Dibromoethane (EDB)	16	Not Detected	120	Not Detected
Chlorobenzene	16	120	75	540
Ethyl Benzene	16	32	70	140
m,p-Xylene	16	70	70	310
o-Xylene	16	17	70	74
Styrene	16	Not Detected	69	Not Detected
Bromoform	16	Not Detected	170	Not Detected
Cumene	16	98	80	480
1,1,1,2-Tetrachloroethane	16	Not Detected	110	Not Detected
Propylbenzene	16	74	80	360
4-Ethyltoluene	16	Not Detected	80	Not Detected
1,3,5-Trimethylbenzene	16	22	80	110
1,2,4-Trimethylbenzene	16	60	80	300
1,3-Dichlorobenzene	16	Not Detected	98	Not Detected
1,4-Dichlorobenzene	16	Not Detected	98	Not Detected
alpha-Chlorotoluene	16	Not Detected	84	Not Detected
1,2-Dichlorobenzene	16	Not Detected	98	Not Detected
1,2,4-Trichlorobenzene	65	Not Detected	480	Not Detected
Hexachlorobutadiene	65	Not Detected	690	Not Detected
Naphthalene	65	Not Detected	340	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGI-25

Lab ID#: 2410133A-25A

EPA METHOD TO-15 GC/MS

File Name:	14101647	Date of Collection:	9/30/24 12:35:00 PM
Dil. Factor:	1.55	Date of Analysis:	10/17/24 05:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.8	10	38	50
Freon 114	7.8	52	54	360
Chloromethane	31	Not Detected	64	Not Detected
Vinyl Chloride	7.8	26	20	68
1,3-Butadiene	7.8	Not Detected	17	Not Detected
Bromomethane	31	Not Detected	120	Not Detected
Chloroethane	31	55	82	140
Freon 11	7.8	Not Detected	44	Not Detected
Ethanol	39	Not Detected	73	Not Detected
Freon 113	7.8	Not Detected	59	Not Detected
1,1-Dichloroethene	7.8	Not Detected	31	Not Detected
Acetone	31	79	74	190
2-Propanol	39	Not Detected	95	Not Detected
Carbon Disulfide	31	Not Detected	96	Not Detected
3-Chloropropene	31	Not Detected	97	Not Detected
Methylene Chloride	31	Not Detected	110	Not Detected
Methyl tert-butyl ether	7.8	Not Detected	28	Not Detected
trans-1,2-Dichloroethene	7.8	Not Detected	31	Not Detected
Hexane	7.8	520	27	1800
1,1-Dichloroethane	7.8	9.4	31	38
2-Butanone (Methyl Ethyl Ketone)	31	120	91	360
cis-1,2-Dichloroethene	7.8	Not Detected	31	Not Detected
Tetrahydrofuran	7.8	Not Detected	23	Not Detected
Chloroform	7.8	Not Detected	38	Not Detected
1,1,1-Trichloroethane	7.8	Not Detected	42	Not Detected
Cyclohexane	7.8	190	27	660
Carbon Tetrachloride	7.8	Not Detected	49	Not Detected
2,2,4-Trimethylpentane	7.8	98	36	460
Benzene	7.8	160	25	520
1,2-Dichloroethane	7.8	Not Detected	31	Not Detected
Heptane	7.8	770	32	3200
Trichloroethene	7.8	Not Detected	42	Not Detected
1,2-Dichloropropane	7.8	Not Detected	36	Not Detected
1,4-Dioxane	31	Not Detected	110	Not Detected
Bromodichloromethane	7.8	Not Detected	52	Not Detected
cis-1,3-Dichloropropene	7.8	Not Detected	35	Not Detected
4-Methyl-2-pentanone	31	Not Detected	130	Not Detected
Toluene	7.8	16	29	60
trans-1,3-Dichloropropene	7.8	Not Detected	35	Not Detected
1,1,2-Trichloroethane	7.8	240	42	1300
Tetrachloroethene	7.8	Not Detected	52	Not Detected
2-Hexanone	31	Not Detected	130	Not Detected

Client Sample ID: SGI-25

Lab ID#: 2410133A-25A

EPA METHOD TO-15 GC/MS

File Name:	14101647	Date of Collection:	9/30/24 12:35:00 PM
Dil. Factor:	1.55	Date of Analysis:	10/17/24 05:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.8	Not Detected	66	Not Detected
1,2-Dibromoethane (EDB)	7.8	Not Detected	60	Not Detected
Chlorobenzene	7.8	330	36	1500
Ethyl Benzene	7.8	12	34	53
m,p-Xylene	7.8	23	34	100
o-Xylene	7.8	13	34	55
Styrene	7.8	Not Detected	33	Not Detected
Bromoform	7.8	Not Detected	80	Not Detected
Cumene	7.8	57	38	280
1,1,2,2-Tetrachloroethane	7.8	Not Detected	53	Not Detected
Propylbenzene	7.8	26	38	130
4-Ethyltoluene	7.8	Not Detected	38	Not Detected
1,3,5-Trimethylbenzene	7.8	Not Detected	38	Not Detected
1,2,4-Trimethylbenzene	7.8	Not Detected	38	Not Detected
1,3-Dichlorobenzene	7.8	Not Detected	46	Not Detected
1,4-Dichlorobenzene	7.8	Not Detected	46	Not Detected
alpha-Chlorotoluene	7.8	Not Detected	40	Not Detected
1,2-Dichlorobenzene	7.8	Not Detected	46	Not Detected
1,2,4-Trichlorobenzene	31	Not Detected	230	Not Detected
Hexachlorobutadiene	31	Not Detected	330	Not Detected
Naphthalene	31	Not Detected	160	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	101	70-130

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 11:05 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101406	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 11:05 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Naphthalene	1.0	Not Detected	5.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	93	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26B

EPA METHOD TO-15 GC/MS

File Name:	14101636a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 11:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	5.0	Not Detected	25	Not Detected
Freon 114	5.0	Not Detected	35	Not Detected
Chloromethane	20	Not Detected	41	Not Detected
Vinyl Chloride	5.0	Not Detected	13	Not Detected
1,3-Butadiene	5.0	Not Detected	11	Not Detected
Bromomethane	20	Not Detected	78	Not Detected
Chloroethane	20	Not Detected	53	Not Detected
Freon 11	5.0	Not Detected	28	Not Detected
Ethanol	25	Not Detected	47	Not Detected
Freon 113	5.0	Not Detected	38	Not Detected
1,1-Dichloroethene	5.0	Not Detected	20	Not Detected
Acetone	20	Not Detected	48	Not Detected
2-Propanol	25	Not Detected	61	Not Detected
Carbon Disulfide	20	Not Detected	62	Not Detected
3-Chloropropene	20	Not Detected	63	Not Detected
Methylene Chloride	20	Not Detected	69	Not Detected
Methyl tert-butyl ether	5.0	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Hexane	5.0	Not Detected	18	Not Detected
1,1-Dichloroethane	5.0	Not Detected	20	Not Detected
2-Butanone (Methyl Ethyl Ketone)	20	Not Detected	59	Not Detected
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Tetrahydrofuran	5.0	Not Detected	15	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Cyclohexane	5.0	Not Detected	17	Not Detected
Carbon Tetrachloride	5.0	Not Detected	31	Not Detected
2,2,4-Trimethylpentane	5.0	Not Detected	23	Not Detected
Benzene	5.0	Not Detected	16	Not Detected
1,2-Dichloroethane	5.0	Not Detected	20	Not Detected
Heptane	5.0	Not Detected	20	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
1,2-Dichloropropane	5.0	Not Detected	23	Not Detected
1,4-Dioxane	20	Not Detected	72	Not Detected
Bromodichloromethane	5.0	Not Detected	34	Not Detected
cis-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
4-Methyl-2-pentanone	20	Not Detected	82	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
trans-1,3-Dichloropropene	5.0	Not Detected	23	Not Detected
1,1,2-Trichloroethane	5.0	Not Detected	27	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
2-Hexanone	20	Not Detected	82	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26B

EPA METHOD TO-15 GC/MS

File Name:	14101636a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 11:39 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	5.0	Not Detected	42	Not Detected
1,2-Dibromoethane (EDB)	5.0	Not Detected	38	Not Detected
Chlorobenzene	5.0	Not Detected	23	Not Detected
Ethyl Benzene	5.0	Not Detected	22	Not Detected
m,p-Xylene	5.0	Not Detected	22	Not Detected
o-Xylene	5.0	Not Detected	22	Not Detected
Styrene	5.0	Not Detected	21	Not Detected
Bromoform	5.0	Not Detected	52	Not Detected
Cumene	5.0	Not Detected	24	Not Detected
1,1,2,2-Tetrachloroethane	5.0	Not Detected	34	Not Detected
Propylbenzene	5.0	Not Detected	24	Not Detected
4-Ethyltoluene	5.0	Not Detected	24	Not Detected
1,3,5-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,2,4-Trimethylbenzene	5.0	Not Detected	24	Not Detected
1,3-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,4-Dichlorobenzene	5.0	Not Detected	30	Not Detected
alpha-Chlorotoluene	5.0	Not Detected	26	Not Detected
1,2-Dichlorobenzene	5.0	Not Detected	30	Not Detected
1,2,4-Trichlorobenzene	20	Not Detected	150	Not Detected
Hexachlorobutadiene	20	Not Detected	210	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101708	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/17/24 12:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2410133A-26C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101708	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/17/24 12:17 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Naphthalene	1.0	Not Detected	5.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	93	70-130

Client Sample ID: CCV

Lab ID#: 2410133A-27A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:36 AM

Compound	%Recovery
Freon 12	101
Freon 114	99
Chloromethane	98
Vinyl Chloride	99
1,3-Butadiene	93
Bromomethane	126
Chloroethane	76
Freon 11	97
Ethanol	88
Freon 113	92
1,1-Dichloroethene	86
Acetone	74
2-Propanol	88
Carbon Disulfide	89
3-Chloropropene	82
Methylene Chloride	108
Methyl tert-butyl ether	82
trans-1,2-Dichloroethene	96
Hexane	87
1,1-Dichloroethane	97
2-Butanone (Methyl Ethyl Ketone)	93
cis-1,2-Dichloroethene	90
Tetrahydrofuran	94
Chloroform	95
1,1,1-Trichloroethane	95
Cyclohexane	82
Carbon Tetrachloride	99
2,2,4-Trimethylpentane	100
Benzene	108
1,2-Dichloroethane	115
Heptane	100
Trichloroethene	108
1,2-Dichloropropane	111
1,4-Dioxane	106
Bromodichloromethane	113
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	102
Toluene	115
trans-1,3-Dichloropropene	100
1,1,2-Trichloroethane	109
Tetrachloroethene	114
2-Hexanone	103

Client Sample ID: CCV

Lab ID#: 2410133A-27A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:36 AM

Compound	%Recovery
Dibromochloromethane	118
1,2-Dibromoethane (EDB)	109
Chlorobenzene	107
Ethyl Benzene	107
m,p-Xylene	108
o-Xylene	102
Styrene	109
Bromoform	115
Cumene	104
1,1,2,2-Tetrachloroethane	115
Propylbenzene	114
4-Ethyltoluene	119
1,3,5-Trimethylbenzene	115
1,2,4-Trimethylbenzene	115
1,3-Dichlorobenzene	126
1,4-Dichlorobenzene	123
alpha-Chlorotoluene	113
1,2-Dichlorobenzene	125
1,2,4-Trichlorobenzene	116
Hexachlorobutadiene	125
Naphthalene	87

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	112	70-130

Client Sample ID: CCV

Lab ID#: 2410133A-27B

EPA METHOD TO-15 GC/MS

File Name:	14101633	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 10:27 PM

Compound	%Recovery
Freon 12	96
Freon 114	96
Chloromethane	110
Vinyl Chloride	99
1,3-Butadiene	112
Bromomethane	99
Chloroethane	102
Freon 11	105
Ethanol	80
Freon 113	103
1,1-Dichloroethene	105
Acetone	105
2-Propanol	94
Carbon Disulfide	88
3-Chloropropene	92
Methylene Chloride	113
Methyl tert-butyl ether	92
trans-1,2-Dichloroethene	88
Hexane	100
1,1-Dichloroethane	100
2-Butanone (Methyl Ethyl Ketone)	92
cis-1,2-Dichloroethene	92
Tetrahydrofuran	100
Chloroform	97
1,1,1-Trichloroethane	92
Cyclohexane	91
Carbon Tetrachloride	98
2,2,4-Trimethylpentane	101
Benzene	94
1,2-Dichloroethane	108
Heptane	86
Trichloroethene	100
1,2-Dichloropropane	99
1,4-Dioxane	96
Bromodichloromethane	95
cis-1,3-Dichloropropene	90
4-Methyl-2-pentanone	84
Toluene	95
trans-1,3-Dichloropropene	91
1,1,2-Trichloroethane	93
Tetrachloroethene	106
2-Hexanone	98

Client Sample ID: CCV

Lab ID#: 2410133A-27B

EPA METHOD TO-15 GC/MS

File Name:	14101633	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 10:27 PM

Compound	%Recovery
Dibromochloromethane	101
1,2-Dibromoethane (EDB)	97
Chlorobenzene	99
Ethyl Benzene	92
m,p-Xylene	96
o-Xylene	97
Styrene	96
Bromoform	97
Cumene	98
1,1,2,2-Tetrachloroethane	95
Propylbenzene	101
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	99
1,2,4-Trimethylbenzene	101
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	107
alpha-Chlorotoluene	80
1,2-Dichlorobenzene	105
1,2,4-Trichlorobenzene	105
Hexachlorobutadiene	104
Naphthalene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	102	70-130

Client Sample ID: CCV

Lab ID#: 2410133A-27C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 09:46 AM

Compound	%Recovery
Freon 12	107
Freon 114	104
Chloromethane	101
Vinyl Chloride	104
1,3-Butadiene	96
Bromomethane	130
Chloroethane	75
Freon 11	103
Ethanol	92
Freon 113	96
1,1-Dichloroethene	91
Acetone	76
2-Propanol	88
Carbon Disulfide	92
3-Chloropropene	85
Methylene Chloride	110
Methyl tert-butyl ether	84
trans-1,2-Dichloroethene	100
Hexane	90
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	96
cis-1,2-Dichloroethene	93
Tetrahydrofuran	97
Chloroform	98
1,1,1-Trichloroethane	100
Cyclohexane	86
Carbon Tetrachloride	105
2,2,4-Trimethylpentane	103
Benzene	110
1,2-Dichloroethane	118
Heptane	100
Trichloroethene	111
1,2-Dichloropropane	114
1,4-Dioxane	106
Bromodichloromethane	117
cis-1,3-Dichloropropene	103
4-Methyl-2-pentanone	105
Toluene	119
trans-1,3-Dichloropropene	103
1,1,2-Trichloroethane	110
Tetrachloroethene	117
2-Hexanone	107

Client Sample ID: CCV

Lab ID#: 2410133A-27C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101703	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 09:46 AM

Compound	%Recovery
Dibromochloromethane	121
1,2-Dibromoethane (EDB)	110
Chlorobenzene	108
Ethyl Benzene	107
m,p-Xylene	109
o-Xylene	102
Styrene	110
Bromoform	118
Cumene	106
1,1,2,2-Tetrachloroethane	116
Propylbenzene	116
4-Ethyltoluene	119
1,3,5-Trimethylbenzene	118
1,2,4-Trimethylbenzene	117
1,3-Dichlorobenzene	130
1,4-Dichlorobenzene	126
alpha-Chlorotoluene	115
1,2-Dichlorobenzene	130
1,2,4-Trichlorobenzene	118
Hexachlorobutadiene	128
Naphthalene	86

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	112	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	115	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:05 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	102	70-130
Chloromethane	102	70-130
Vinyl Chloride	107	70-130
1,3-Butadiene	99	70-130
Bromomethane	129	70-130
Chloroethane	78	70-130
Freon 11	101	70-130
Ethanol	95	70-130
Freon 113	93	70-130
1,1-Dichloroethene	87	70-130
Acetone	79	70-130
2-Propanol	103	70-130
Carbon Disulfide	91	70-130
3-Chloropropene	90	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	86	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	92	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	101	70-130
Chloroform	93	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	86	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	107	70-130
1,2-Dichloroethane	111	70-130
Heptane	97	70-130
Trichloroethene	105	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	106	70-130
cis-1,3-Dichloropropene	102	70-130
4-Methyl-2-pentanone	98	70-130
Toluene	110	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	114	70-130
2-Hexanone	100	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:05 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	106	70-130
Ethyl Benzene	107	70-130
m,p-Xylene	107	70-130
o-Xylene	102	70-130
Styrene	105	70-130
Bromoform	110	70-130
Cumene	102	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	108	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	112	70-130
1,2,4-Trimethylbenzene	111	70-130
1,3-Dichlorobenzene	121	70-130
1,4-Dichlorobenzene	117	70-130
alpha-Chlorotoluene	105	70-130
1,2-Dichlorobenzene	117	70-130
1,2,4-Trichlorobenzene	123	70-130
Hexachlorobutadiene	131 Q	70-130
Naphthalene	86	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: LCSD

Lab ID#: 2410133A-28AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:34 AM

Compound	%Recovery	Method Limits
Freon 12	99	70-130
Freon 114	98	70-130
Chloromethane	98	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	96	70-130
Bromomethane	130	70-130
Chloroethane	79	70-130
Freon 11	96	70-130
Ethanol	94	70-130
Freon 113	89	70-130
1,1-Dichloroethene	86	70-130
Acetone	74	70-130
2-Propanol	103	70-130
Carbon Disulfide	89	70-130
3-Chloropropene	90	70-130
Methylene Chloride	106	70-130
Methyl tert-butyl ether	85	70-130
trans-1,2-Dichloroethene	94	70-130
Hexane	91	70-130
1,1-Dichloroethane	96	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	92	70-130
Tetrahydrofuran	100	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	93	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	97	70-130
2,2,4-Trimethylpentane	104	70-130
Benzene	102	70-130
1,2-Dichloroethane	107	70-130
Heptane	94	70-130
Trichloroethene	101	70-130
1,2-Dichloropropane	105	70-130
1,4-Dioxane	98	70-130
Bromodichloromethane	104	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	97	70-130
Toluene	106	70-130
trans-1,3-Dichloropropene	98	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	109	70-130
2-Hexanone	98	70-130

Client Sample ID: LCSD

Lab ID#: 2410133A-28AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:34 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	108	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	102	70-130
m,p-Xylene	103	70-130
o-Xylene	99	70-130
Styrene	100	70-130
Bromoform	104	70-130
Cumene	98	70-130
1,1,2,2-Tetrachloroethane	101	70-130
Propylbenzene	101	70-130
4-Ethyltoluene	104	70-130
1,3,5-Trimethylbenzene	105	70-130
1,2,4-Trimethylbenzene	104	70-130
1,3-Dichlorobenzene	111	70-130
1,4-Dichlorobenzene	109	70-130
alpha-Chlorotoluene	98	70-130
1,2-Dichlorobenzene	111	70-130
1,2,4-Trichlorobenzene	119	70-130
Hexachlorobutadiene	125	70-130
Naphthalene	83	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	105	70-130
1,2-Dichloroethane-d4	94	70-130
4-Bromofluorobenzene	106	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28B

EPA METHOD TO-15 GC/MS

File Name:	14101634	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 10:49 PM

Compound	%Recovery	Method Limits
Freon 12	95	70-130
Freon 114	98	70-130
Chloromethane	109	70-130
Vinyl Chloride	100	70-130
1,3-Butadiene	107	70-130
Bromomethane	100	70-130
Chloroethane	98	70-130
Freon 11	107	70-130
Ethanol	92	70-130
Freon 113	100	70-130
1,1-Dichloroethene	99	70-130
Acetone	102	70-130
2-Propanol	106	70-130
Carbon Disulfide	85	70-130
3-Chloropropene	92	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	89	70-130
Hexane	97	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	92	70-130
cis-1,2-Dichloroethene	90	70-130
Tetrahydrofuran	101	70-130
Chloroform	94	70-130
1,1,1-Trichloroethane	93	70-130
Cyclohexane	91	70-130
Carbon Tetrachloride	98	70-130
2,2,4-Trimethylpentane	103	70-130
Benzene	96	70-130
1,2-Dichloroethane	107	70-130
Heptane	84	70-130
Trichloroethene	99	70-130
1,2-Dichloropropane	95	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	90	70-130
cis-1,3-Dichloropropene	89	70-130
4-Methyl-2-pentanone	85	70-130
Toluene	92	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	91	70-130
Tetrachloroethene	104	70-130
2-Hexanone	101	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28B

EPA METHOD TO-15 GC/MS

File Name:	14101634	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 10:49 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	93	70-130
Chlorobenzene	100	70-130
Ethyl Benzene	97	70-130
m,p-Xylene	96	70-130
o-Xylene	96	70-130
Styrene	96	70-130
Bromoform	96	70-130
Cumene	96	70-130
1,1,2,2-Tetrachloroethane	93	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	100	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	103	70-130
alpha-Chlorotoluene	77	70-130
1,2-Dichlorobenzene	101	70-130
1,2,4-Trichlorobenzene	105	70-130
Hexachlorobutadiene	102	70-130
Naphthalene	86	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	104	70-130



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2410133A-28BB

EPA METHOD TO-15 GC/MS

File Name:	14101635	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 11:15 PM

Compound	%Recovery	Method Limits
Freon 12	98	70-130
Freon 114	102	70-130
Chloromethane	117	70-130
Vinyl Chloride	104	70-130
1,3-Butadiene	107	70-130
Bromomethane	104	70-130
Chloroethane	104	70-130
Freon 11	109	70-130
Ethanol	105	70-130
Freon 113	103	70-130
1,1-Dichloroethene	105	70-130
Acetone	108	70-130
2-Propanol	107	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	90	70-130
Methylene Chloride	113	70-130
Methyl tert-butyl ether	93	70-130
trans-1,2-Dichloroethene	90	70-130
Hexane	102	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	91	70-130
cis-1,2-Dichloroethene	90	70-130
Tetrahydrofuran	105	70-130
Chloroform	95	70-130
1,1,1-Trichloroethane	96	70-130
Cyclohexane	91	70-130
Carbon Tetrachloride	100	70-130
2,2,4-Trimethylpentane	106	70-130
Benzene	95	70-130
1,2-Dichloroethane	108	70-130
Heptane	86	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	93	70-130
Bromodichloromethane	93	70-130
cis-1,3-Dichloropropene	90	70-130
4-Methyl-2-pentanone	88	70-130
Toluene	95	70-130
trans-1,3-Dichloropropene	91	70-130
1,1,2-Trichloroethane	90	70-130
Tetrachloroethene	106	70-130
2-Hexanone	101	70-130

Client Sample ID: LCSD

Lab ID#: 2410133A-28BB

EPA METHOD TO-15 GC/MS

File Name:	14101635	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/16/24 11:15 PM

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	94	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	96	70-130
m,p-Xylene	98	70-130
o-Xylene	95	70-130
Styrene	96	70-130
Bromoform	97	70-130
Cumene	96	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	92	70-130
4-Ethyltoluene	98	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	102	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	79	70-130
1,2-Dichlorobenzene	100	70-130
1,2,4-Trichlorobenzene	111	70-130
Hexachlorobutadiene	110	70-130
Naphthalene	89	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	96	70-130
4-Bromofluorobenzene	103	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 10:17 AM

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	105	70-130
Chloromethane	106	70-130
Vinyl Chloride	108	70-130
1,3-Butadiene	100	70-130
Bromomethane	134 Q	70-130
Chloroethane	80	70-130
Freon 11	102	70-130
Ethanol	92	70-130
Freon 113	94	70-130
1,1-Dichloroethene	88	70-130
Acetone	79	70-130
2-Propanol	103	70-130
Carbon Disulfide	90	70-130
3-Chloropropene	87	70-130
Methylene Chloride	110	70-130
Methyl tert-butyl ether	85	70-130
trans-1,2-Dichloroethene	96	70-130
Hexane	90	70-130
1,1-Dichloroethane	100	70-130
2-Butanone (Methyl Ethyl Ketone)	96	70-130
cis-1,2-Dichloroethene	93	70-130
Tetrahydrofuran	101	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	99	70-130
Cyclohexane	86	70-130
Carbon Tetrachloride	103	70-130
2,2,4-Trimethylpentane	106	70-130
Benzene	111	70-130
1,2-Dichloroethane	114	70-130
Heptane	98	70-130
Trichloroethene	109	70-130
1,2-Dichloropropane	112	70-130
1,4-Dioxane	101	70-130
Bromodichloromethane	110	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	103	70-130
Toluene	114	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	114	70-130
2-Hexanone	101	70-130

Client Sample ID: LCS

Lab ID#: 2410133A-28C

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101704	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 10:17 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	116	70-130
1,2-Dibromoethane (EDB)	107	70-130
Chlorobenzene	109	70-130
Ethyl Benzene	109	70-130
m,p-Xylene	108	70-130
o-Xylene	102	70-130
Styrene	107	70-130
Bromoform	113	70-130
Cumene	104	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	110	70-130
4-Ethyltoluene	113	70-130
1,3,5-Trimethylbenzene	114	70-130
1,2,4-Trimethylbenzene	114	70-130
1,3-Dichlorobenzene	123	70-130
1,4-Dichlorobenzene	120	70-130
alpha-Chlorotoluene	106	70-130
1,2-Dichlorobenzene	122	70-130
1,2,4-Trichlorobenzene	126	70-130
Hexachlorobutadiene	136 Q	70-130
Naphthalene	83	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	110	70-130

Client Sample ID: LCSD

Lab ID#: 2410133A-28CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 10:48 AM

Compound	%Recovery	Method Limits
Freon 12	104	70-130
Freon 114	104	70-130
Chloromethane	104	70-130
Vinyl Chloride	109	70-130
1,3-Butadiene	100	70-130
Bromomethane	134 Q	70-130
Chloroethane	79	70-130
Freon 11	104	70-130
Ethanol	96	70-130
Freon 113	94	70-130
1,1-Dichloroethene	89	70-130
Acetone	79	70-130
2-Propanol	105	70-130
Carbon Disulfide	92	70-130
3-Chloropropene	92	70-130
Methylene Chloride	111	70-130
Methyl tert-butyl ether	88	70-130
trans-1,2-Dichloroethene	98	70-130
Hexane	93	70-130
1,1-Dichloroethane	101	70-130
2-Butanone (Methyl Ethyl Ketone)	98	70-130
cis-1,2-Dichloroethene	94	70-130
Tetrahydrofuran	105	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	97	70-130
Cyclohexane	89	70-130
Carbon Tetrachloride	102	70-130
2,2,4-Trimethylpentane	108	70-130
Benzene	109	70-130
1,2-Dichloroethane	113	70-130
Heptane	98	70-130
Trichloroethene	108	70-130
1,2-Dichloropropane	109	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	108	70-130
cis-1,3-Dichloropropene	104	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	111	70-130
trans-1,3-Dichloropropene	102	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	114	70-130
2-Hexanone	100	70-130

Client Sample ID: LCSD

Lab ID#: 2410133A-28CC

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	p101705	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/17/24 10:48 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	114	70-130
1,2-Dibromoethane (EDB)	106	70-130
Chlorobenzene	107	70-130
Ethyl Benzene	106	70-130
m,p-Xylene	107	70-130
o-Xylene	100	70-130
Styrene	103	70-130
Bromoform	110	70-130
Cumene	101	70-130
1,1,2,2-Tetrachloroethane	106	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	110	70-130
1,2,4-Trimethylbenzene	109	70-130
1,3-Dichlorobenzene	117	70-130
1,4-Dichlorobenzene	115	70-130
alpha-Chlorotoluene	102	70-130
1,2-Dichlorobenzene	116	70-130
1,2,4-Trichlorobenzene	126	70-130
Hexachlorobutadiene	136 Q	70-130
Naphthalene	87	60-140

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	108	70-130

Method : TO-15 + Naph

CAS Number	Compound	Rpt. Limit (ppbv)
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

Method : TO-15 + Naph

CAS Number	Compound	Rpt. Limit (ppbv)
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0
91-20-3	Naphthalene	1.0

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
 Phone (800) 985-5955; Fax (916) 351-8279

For Laboratory Use Only
 PID: _____ Workorder #: 2410133

Click links below to view:
[Canister Sampling Guide](#)
[Helium Shroud Video](#)

Client: <u>STME Inc.</u>	PID: _____	Special Instructions/Notes:	Turnaround Time (Rush surcharges may apply)						
Project Name: <u>Cliffdale LF</u>			Select TAT from drop down box						
Project Manager: <u>Tom Raymond, Jerry Paul</u>	P.O.# _____		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:50%;">Canister Vacuum/Pressure</th> <th style="width:50%;">Requested Analyses</th> </tr> <tr> <td style="text-align: center;">Lab Use Only</td> <td style="text-align: center;">10-15 Method 1946</td> </tr> <tr> <td style="text-align: center;">Receipt</td> <td style="text-align: center;">Final (psig) Gas: N₂ / He</td> </tr> </table>	Canister Vacuum/Pressure	Requested Analyses	Lab Use Only	10-15 Method 1946	Receipt	Final (psig) Gas: N ₂ / He
Canister Vacuum/Pressure	Requested Analyses								
Lab Use Only	10-15 Method 1946								
Receipt	Final (psig) Gas: N ₂ / He								
Sampler: <u>James Waters / Connor Hicks</u>									
Site Name: <u>Cliffdale LF 23050459</u>									

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N ₂ / He	10-15	Method 1946
				Date	Time	Date	Time						
01A	SGP-1	6L1296	23793	9/24/24	1050	9/24/24	1500	30	7			✓	✓
02A	SGP-2	6L1538	24406		1125		1425	28	7				
03A	SGP-3	6L1632	23578		1200		1520	29	3				
04A	SGP-4	6L0832	23618		1230		1540	29	5				
05A	SGP-5	6L0658	24143		1315		1610	30	5				
06A	SGI-6	6L3748	23996		1330		1620	30	6				
07A	SGP-7	6L0316	23106		1410		1630	30	7				
08A	Duplicate-1	6L1590	24884		1200		1255	28	3				
09A	SGP-8	6L0502	23971	9/25/24	0945	9/25/24	1210	28	5				
10A	SGP-9	6L1357	23505		1020		1310	30	6				
11A	SGP-10	6L2346	26251		1235		1515	29	5				
12A	SGP-11	6L0986	24704		1200		1420	30	3				
13A	SGI-12	6L1147	23356		1115		1425	30	5				
14A	SGP-13	6L1577	24316		1055		1340	30	6				
15A	SGP-14	6L0135	23268		1315		1540	30	6				
16A	Duplicate-2	6L0387	23755		1200		1505	27	7				

Relinquished by: (Signature/Affiliation) <u>James A. Waters</u>	Date <u>10/1/24</u>	Time <u>1200</u>	Received by: (Signature/Affiliation) <u>Justin Batic</u>	Date <u>10.2.24</u>	Time <u>1041</u>
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: <u>FedEx</u>	Custody Seals Intact?	Yes	No	None <input checked="" type="radio"/>
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Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922



Air Toxics

Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Analysis Request / Canister Chain of Custody

Instructions



If no TAT is marked, EATL will proceed with Standard TAT

page 2 of 3

Workorder #: 2410133

Client: <u>SXME</u>	Project Name: <u>Cliffside LF</u>	Turnaround Time (Specify Below)	
Site Name: <u>Cliffside LF</u>	Project #: <u>23050454</u>	Standard _____ Rush _____ (Surcharges will apply, per availability)	Requested Date (mm/dd/yyyy): _____
Project Manager: <u>Tom Raymond / Jerry Paul</u>	PO#: _____	QR Number of Days: _____	
Sampler: <u>Conner Hicks / James Waters</u>		Requested Analyses	

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		TU-15	M-1946	Canister Vacuum/Pressure			
				Date	Time	Date	Time			Initial (in Hg)	Final (in Hg)	Receipt (in Hg)	Final (in psi) Gas: N2 / He
17A	SGI-18	6L2486	23451	9/26/24	1000	9/26/24	1230			30	6		
18A	SGP-19	6L0856	24746		1030		1315			30	6		
19A	SGP-20	6L0818	26258		1100		1350			30	7		
20A	SGP-27	6L0745	24047		1140		1440			30	6		
21A	SGP-28	6L1225	25190		1210		1500			30	6		
22A	SGP-24	6L2844	23184		1245		1410			20	6		
23A	Duplicate - 3	6L1572	24142					✓	✓	30	5		
24A	SGI-26	6L2963	24537	9/30/24	0955	9/30/24	1215	✓	✓	30	2		
25A	SGI-35	6L1316	23345		1010		1235	✓	✓	29	7		
26A	SGP-24	6L0641	23728		1035		1309	✓	✓	30	5		
27A	SGP-23	6L0575	23117		1105		1330	✓	✓	30	5		
28A	SGP-22	6L0610	23140		1125		1410	✓	✓	28	6		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation) <u>Car [Signature] SXME</u>	Date 9/26/24	Time 1700	Received by: (Signature/Affiliation) <u>[Signature] EATL</u>	Date 10.2.24	Time 1041
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: Fed Ex Custody Seals Intact? Yes No None Condition: _____

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

10/15/2024

Connor Hicks

S & ME, Inc.

3201 Spring Forest Road

Raleigh NC 27616

Project Name: Cliffdale LF

Project #: 23050459

Workorder #: 2410133B

Dear Connor Hicks

The following report includes the data for the above referenced project for sample(s) received on 10/2/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

WORK ORDER #: 2410133B

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/15/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
26A	SGP-24	TO-15	6.1 "Hg	1.7 psi
27A	SGP-23	TO-15	8.6 "Hg	1.8 psi
28A	SGP-22	TO-15	9 "Hg	1.7 psi
29A	SGP-21	TO-15	7.3 "Hg	2.1 psi
30A	Duplicate-4	TO-15	8.6 "Hg	1.8 psi
31A	Lab Blank	TO-15	NA	NA
32A	CCV	TO-15	NA	NA
33A	LCS	TO-15	NA	NA
33AA	LCSD	TO-15	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 10/15/24

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2703122, NH NELAP-209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20

Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
S & ME, Inc.
Workorder# 2410133B

Five 6 Liter Summa Canister samples were received on October 02, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on samples SGP-24, SGP-23, SGP-22 and SGP-21 due to the presence of high level target species.

Dilution was performed on sample Duplicate-4 due to matrix interference.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: SGP-24

Lab ID#: 2410133B-26A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	9.4	180	46	910
Freon 114	9.4	120	65	840
Vinyl Chloride	9.4	68	24	170
Chloroethane	37	330	99	870
trans-1,2-Dichloroethene	9.4	15	37	59
Hexane	9.4	3000	33	10000
cis-1,2-Dichloroethene	9.4	170	37	680
Cyclohexane	9.4	3000	32	10000
2,2,4-Trimethylpentane	9.4	440	44	2000
Benzene	9.4	300	30	950
Heptane	9.4	3700	38	15000
Trichloroethene	9.4	17	50	90
Ethyl Benzene	9.4	9.4	40	41
Cumene	9.4	20	46	98

Client Sample ID: SGP-23

Lab ID#: 2410133B-27A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.8	900	39	4400
Freon 114	7.8	160	55	1100
Vinyl Chloride	7.8	170	20	440
Freon 11	7.8	32	44	180
Hexane	7.8	240	28	830
cis-1,2-Dichloroethene	7.8	110	31	440
Tetrahydrofuran	7.8	80	23	240
Cyclohexane	7.8	210	27	730
2,2,4-Trimethylpentane	7.8	110	37	510
Benzene	7.8	290	25	930
Heptane	7.8	690	32	2800
Trichloroethene	7.8	20	42	100
Toluene	16	460	59	1700
Tetrachloroethene	7.8	31	53	210

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SGP-23

Lab ID#: 2410133B-27A

Chlorobenzene	7.8	39	36	180
Ethyl Benzene	7.8	2300	34	9900
m,p-Xylene	16	3000	68	13000
o-Xylene	7.8	220	34	960
Cumene	7.8	120	38	590

Propylbenzene	7.8	93	38	460
4-Ethyltoluene	7.8	210	38	1000
1,3,5-Trimethylbenzene	7.8	100	38	510
1,2,4-Trimethylbenzene	7.8	180	38	890
1,4-Dichlorobenzene	7.8	30	47	180

Client Sample ID: SGP-22

Lab ID#: 2410133B-28A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	11	230	52	1100
Freon 114	11	110	74	770
Vinyl Chloride	11	1000	27	2600
Hexane	11	740	37	2600
2-Butanone (Methyl Ethyl Ketone)	42	140	120	410

cis-1,2-Dichloroethene	11	410	42	1600
Cyclohexane	11	1200	36	4000
2,2,4-Trimethylpentane	11	260	50	1200
Benzene	11	830	34	2600
Heptane	11	3400	43	14000

Trichloroethene	11	15	57	81
Toluene	21	940	80	3600
Tetrachloroethene	11	33	72	230
Chlorobenzene	11	37	49	170
Ethyl Benzene	11	1300	46	5600

m,p-Xylene	21	1800	92	8000
o-Xylene	11	350	46	1500
Styrene	11	12	45	52
Cumene	11	76	52	370
Propylbenzene	11	42	52	210

Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: SGP-22

Lab ID#: 2410133B-28A

4-Ethyltoluene	11	92	52	450
1,3,5-Trimethylbenzene	11	44	52	220
1,2,4-Trimethylbenzene	11	64	52	320
1,4-Dichlorobenzene	11	18	64	110

Client Sample ID: SGP-21

Lab ID#: 2410133B-29A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 114	10	24	70	170
Vinyl Chloride	10	31	26	80
Hexane	10	1700	35	5900
cis-1,2-Dichloroethene	10	11	40	44
Cyclohexane	10	2100	34	7200
2,2,4-Trimethylpentane	10	220	47	1000
Benzene	10	330	32	1000
Heptane	10	5500 E	41	23000 E
Toluene	20	60	76	230
Chlorobenzene	10	12	46	57
Ethyl Benzene	10	10	44	44
m,p-Xylene	20	50	87	220
Cumene	10	32	49	160
Propylbenzene	10	14	49	68
1,2,4-Trimethylbenzene	10	10	49	50

Client Sample ID: Duplicate-4

Lab ID#: 2410133B-30A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 114	10	41	73	290
Vinyl Chloride	10	13	27	34
Hexane	10	560	37	2000
Cyclohexane	10	250	36	870
2,2,4-Trimethylpentane	10	88	49	410

**Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN**

Client Sample ID: Duplicate-4

Lab ID#: 2410133B-30A

Benzene	10	240	34	770
Heptane	10	1300	43	5400
Toluene	21	29	79	110
Chlorobenzene	10	810	48	3700
Ethyl Benzene	10	29	46	120

m,p-Xylene	21	66	91	290
o-Xylene	10	37	46	160
Cumene	10	180	52	860
Propylbenzene	10	140	52	670
1,2,4-Trimethylbenzene	10	16	52	79

1,4-Dichlorobenzene	10	46	63	270

Client Sample ID: SGP-24

Lab ID#: 2410133B-26A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101427	Date of Collection:	9/30/24 1:09:00 PM
Dil. Factor:	18.7	Date of Analysis:	10/14/24 11:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	9.4	180	46	910
Freon 114	9.4	120	65	840
Chloromethane	94	Not Detected	190	Not Detected
Vinyl Chloride	9.4	68	24	170
1,3-Butadiene	9.4	Not Detected	21	Not Detected
Bromomethane	94	Not Detected	360	Not Detected
Chloroethane	37	330	99	870
Freon 11	9.4	Not Detected	52	Not Detected
Ethanol	94	Not Detected	180	Not Detected
Freon 113	9.4	Not Detected	72	Not Detected
1,1-Dichloroethene	9.4	Not Detected	37	Not Detected
Acetone	94	Not Detected	220	Not Detected
2-Propanol	37	Not Detected	92	Not Detected
Carbon Disulfide	37	Not Detected	120	Not Detected
3-Chloropropene	37	Not Detected	120	Not Detected
Methylene Chloride	94	Not Detected	320	Not Detected
Methyl tert-butyl ether	37	Not Detected	130	Not Detected
trans-1,2-Dichloroethene	9.4	15	37	59
Hexane	9.4	3000	33	10000
1,1-Dichloroethane	9.4	Not Detected	38	Not Detected
2-Butanone (Methyl Ethyl Ketone)	37	Not Detected	110	Not Detected
cis-1,2-Dichloroethene	9.4	170	37	680
Tetrahydrofuran	9.4	Not Detected	28	Not Detected
Chloroform	9.4	Not Detected	46	Not Detected
1,1,1-Trichloroethane	9.4	Not Detected	51	Not Detected
Cyclohexane	9.4	3000	32	10000
Carbon Tetrachloride	9.4	Not Detected	59	Not Detected
2,2,4-Trimethylpentane	9.4	440	44	2000
Benzene	9.4	300	30	950
1,2-Dichloroethane	9.4	Not Detected	38	Not Detected
Heptane	9.4	3700	38	15000
Trichloroethene	9.4	17	50	90
1,2-Dichloropropane	9.4	Not Detected	43	Not Detected
1,4-Dioxane	37	Not Detected	130	Not Detected
Bromodichloromethane	9.4	Not Detected	63	Not Detected
cis-1,3-Dichloropropene	9.4	Not Detected	42	Not Detected
4-Methyl-2-pentanone	9.4	Not Detected	38	Not Detected
Toluene	19	Not Detected	70	Not Detected
trans-1,3-Dichloropropene	9.4	Not Detected	42	Not Detected
1,1,2-Trichloroethane	9.4	Not Detected	51	Not Detected
Tetrachloroethene	9.4	Not Detected	63	Not Detected
2-Hexanone	37	Not Detected	150	Not Detected

Client Sample ID: SGP-24

Lab ID#: 2410133B-26A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101427	Date of Collection:	9/30/24 1:09:00 PM
Dil. Factor:	18.7	Date of Analysis:	10/14/24 11:45 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	9.4	Not Detected	80	Not Detected
1,2-Dibromoethane (EDB)	9.4	Not Detected	72	Not Detected
Chlorobenzene	9.4	Not Detected	43	Not Detected
Ethyl Benzene	9.4	9.4	40	41
m,p-Xylene	19	Not Detected	81	Not Detected
o-Xylene	9.4	Not Detected	41	Not Detected
Styrene	9.4	Not Detected	40	Not Detected
Bromoform	9.4	Not Detected	97	Not Detected
Cumene	9.4	20	46	98
1,1,2,2-Tetrachloroethane	9.4	Not Detected	64	Not Detected
Propylbenzene	9.4	Not Detected	46	Not Detected
4-Ethyltoluene	9.4	Not Detected	46	Not Detected
1,3,5-Trimethylbenzene	9.4	Not Detected	46	Not Detected
1,2,4-Trimethylbenzene	9.4	Not Detected	46	Not Detected
1,3-Dichlorobenzene	9.4	Not Detected	56	Not Detected
1,4-Dichlorobenzene	9.4	Not Detected	56	Not Detected
alpha-Chlorotoluene	9.4	Not Detected	48	Not Detected
1,2-Dichlorobenzene	9.4	Not Detected	56	Not Detected
1,2,4-Trichlorobenzene	37	Not Detected	280	Not Detected
Hexachlorobutadiene	37	Not Detected	400	Not Detected
Naphthalene	19	Not Detected	98	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	102	70-130



Air Toxics

Client Sample ID: SGP-23

Lab ID#: 2410133B-27A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101428	Date of Collection:	9/30/24 1:30:00 PM
Dil. Factor:	15.7	Date of Analysis:	10/15/24 12:08 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	7.8	900	39	4400
Freon 114	7.8	160	55	1100
Chloromethane	78	Not Detected	160	Not Detected
Vinyl Chloride	7.8	170	20	440
1,3-Butadiene	7.8	Not Detected	17	Not Detected
Bromomethane	78	Not Detected	300	Not Detected
Chloroethane	31	Not Detected	83	Not Detected
Freon 11	7.8	32	44	180
Ethanol	78	Not Detected	150	Not Detected
Freon 113	7.8	Not Detected	60	Not Detected
1,1-Dichloroethene	7.8	Not Detected	31	Not Detected
Acetone	78	Not Detected	190	Not Detected
2-Propanol	31	Not Detected	77	Not Detected
Carbon Disulfide	31	Not Detected	98	Not Detected
3-Chloropropene	31	Not Detected	98	Not Detected
Methylene Chloride	78	Not Detected	270	Not Detected
Methyl tert-butyl ether	31	Not Detected	110	Not Detected
trans-1,2-Dichloroethene	7.8	Not Detected	31	Not Detected
Hexane	7.8	240	28	830
1,1-Dichloroethane	7.8	Not Detected	32	Not Detected
2-Butanone (Methyl Ethyl Ketone)	31	Not Detected	92	Not Detected
cis-1,2-Dichloroethene	7.8	110	31	440
Tetrahydrofuran	7.8	80	23	240
Chloroform	7.8	Not Detected	38	Not Detected
1,1,1-Trichloroethane	7.8	Not Detected	43	Not Detected
Cyclohexane	7.8	210	27	730
Carbon Tetrachloride	7.8	Not Detected	49	Not Detected
2,2,4-Trimethylpentane	7.8	110	37	510
Benzene	7.8	290	25	930
1,2-Dichloroethane	7.8	Not Detected	32	Not Detected
Heptane	7.8	690	32	2800
Trichloroethene	7.8	20	42	100
1,2-Dichloropropane	7.8	Not Detected	36	Not Detected
1,4-Dioxane	31	Not Detected	110	Not Detected
Bromodichloromethane	7.8	Not Detected	52	Not Detected
cis-1,3-Dichloropropene	7.8	Not Detected	36	Not Detected
4-Methyl-2-pentanone	7.8	Not Detected	32	Not Detected
Toluene	16	460	59	1700
trans-1,3-Dichloropropene	7.8	Not Detected	36	Not Detected
1,1,2-Trichloroethane	7.8	Not Detected	43	Not Detected
Tetrachloroethene	7.8	31	53	210
2-Hexanone	31	Not Detected	130	Not Detected

Client Sample ID: SGP-23

Lab ID#: 2410133B-27A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101428	Date of Collection:	9/30/24 1:30:00 PM
Dil. Factor:	15.7	Date of Analysis:	10/15/24 12:08 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	7.8	Not Detected	67	Not Detected
1,2-Dibromoethane (EDB)	7.8	Not Detected	60	Not Detected
Chlorobenzene	7.8	39	36	180
Ethyl Benzene	7.8	2300	34	9900
m,p-Xylene	16	3000	68	13000
o-Xylene	7.8	220	34	960
Styrene	7.8	Not Detected	33	Not Detected
Bromoform	7.8	Not Detected	81	Not Detected
Cumene	7.8	120	38	590
1,1,2,2-Tetrachloroethane	7.8	Not Detected	54	Not Detected
Propylbenzene	7.8	93	38	460
4-Ethyltoluene	7.8	210	38	1000
1,3,5-Trimethylbenzene	7.8	100	38	510
1,2,4-Trimethylbenzene	7.8	180	38	890
1,3-Dichlorobenzene	7.8	Not Detected	47	Not Detected
1,4-Dichlorobenzene	7.8	30	47	180
alpha-Chlorotoluene	7.8	Not Detected	41	Not Detected
1,2-Dichlorobenzene	7.8	Not Detected	47	Not Detected
1,2,4-Trichlorobenzene	31	Not Detected	230	Not Detected
Hexachlorobutadiene	31	Not Detected	330	Not Detected
Naphthalene	16	Not Detected	82	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	92	70-130

Client Sample ID: SGP-22

Lab ID#: 2410133B-28A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101429	Date of Collection:	9/30/24 2:10:00 PM
Dil. Factor:	21.2	Date of Analysis:	10/15/24 12:31 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	11	230	52	1100
Freon 114	11	110	74	770
Chloromethane	110	Not Detected	220	Not Detected
Vinyl Chloride	11	1000	27	2600
1,3-Butadiene	11	Not Detected	23	Not Detected
Bromomethane	110	Not Detected	410	Not Detected
Chloroethane	42	Not Detected	110	Not Detected
Freon 11	11	Not Detected	60	Not Detected
Ethanol	110	Not Detected	200	Not Detected
Freon 113	11	Not Detected	81	Not Detected
1,1-Dichloroethene	11	Not Detected	42	Not Detected
Acetone	110	Not Detected	250	Not Detected
2-Propanol	42	Not Detected	100	Not Detected
Carbon Disulfide	42	Not Detected	130	Not Detected
3-Chloropropene	42	Not Detected	130	Not Detected
Methylene Chloride	110	Not Detected	370	Not Detected
Methyl tert-butyl ether	42	Not Detected	150	Not Detected
trans-1,2-Dichloroethene	11	Not Detected	42	Not Detected
Hexane	11	740	37	2600
1,1-Dichloroethane	11	Not Detected	43	Not Detected
2-Butanone (Methyl Ethyl Ketone)	42	140	120	410
cis-1,2-Dichloroethene	11	410	42	1600
Tetrahydrofuran	11	Not Detected	31	Not Detected
Chloroform	11	Not Detected	52	Not Detected
1,1,1-Trichloroethane	11	Not Detected	58	Not Detected
Cyclohexane	11	1200	36	4000
Carbon Tetrachloride	11	Not Detected	67	Not Detected
2,2,4-Trimethylpentane	11	260	50	1200
Benzene	11	830	34	2600
1,2-Dichloroethane	11	Not Detected	43	Not Detected
Heptane	11	3400	43	14000
Trichloroethene	11	15	57	81
1,2-Dichloropropane	11	Not Detected	49	Not Detected
1,4-Dioxane	42	Not Detected	150	Not Detected
Bromodichloromethane	11	Not Detected	71	Not Detected
cis-1,3-Dichloropropene	11	Not Detected	48	Not Detected
4-Methyl-2-pentanone	11	Not Detected	43	Not Detected
Toluene	21	940	80	3600
trans-1,3-Dichloropropene	11	Not Detected	48	Not Detected
1,1,2-Trichloroethane	11	Not Detected	58	Not Detected
Tetrachloroethene	11	33	72	230
2-Hexanone	42	Not Detected	170	Not Detected

Client Sample ID: SGP-22

Lab ID#: 2410133B-28A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101429	Date of Collection:	9/30/24 2:10:00 PM
Dil. Factor:	21.2	Date of Analysis:	10/15/24 12:31 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	11	Not Detected	90	Not Detected
1,2-Dibromoethane (EDB)	11	Not Detected	81	Not Detected
Chlorobenzene	11	37	49	170
Ethyl Benzene	11	1300	46	5600
m,p-Xylene	21	1800	92	8000
o-Xylene	11	350	46	1500
Styrene	11	12	45	52
Bromoform	11	Not Detected	110	Not Detected
Cumene	11	76	52	370
1,1,2,2-Tetrachloroethane	11	Not Detected	73	Not Detected
Propylbenzene	11	42	52	210
4-Ethyltoluene	11	92	52	450
1,3,5-Trimethylbenzene	11	44	52	220
1,2,4-Trimethylbenzene	11	64	52	320
1,3-Dichlorobenzene	11	Not Detected	64	Not Detected
1,4-Dichlorobenzene	11	18	64	110
alpha-Chlorotoluene	11	Not Detected	55	Not Detected
1,2-Dichlorobenzene	11	Not Detected	64	Not Detected
1,2,4-Trichlorobenzene	42	Not Detected	310	Not Detected
Hexachlorobutadiene	42	Not Detected	450	Not Detected
Naphthalene	21	Not Detected	110	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: SGP-21

Lab ID#: 2410133B-29A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101430	Date of Collection:	9/30/24 2:40:00 PM
Dil. Factor:	20.1	Date of Analysis:	10/15/24 12:54 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	10	Not Detected	50	Not Detected
Freon 114	10	24	70	170
Chloromethane	100	Not Detected	210	Not Detected
Vinyl Chloride	10	31	26	80
1,3-Butadiene	10	Not Detected	22	Not Detected
Bromomethane	100	Not Detected	390	Not Detected
Chloroethane	40	Not Detected	110	Not Detected
Freon 11	10	Not Detected	56	Not Detected
Ethanol	100	Not Detected	190	Not Detected
Freon 113	10	Not Detected	77	Not Detected
1,1-Dichloroethene	10	Not Detected	40	Not Detected
Acetone	100	Not Detected	240	Not Detected
2-Propanol	40	Not Detected	99	Not Detected
Carbon Disulfide	40	Not Detected	120	Not Detected
3-Chloropropene	40	Not Detected	120	Not Detected
Methylene Chloride	100	Not Detected	350	Not Detected
Methyl tert-butyl ether	40	Not Detected	140	Not Detected
trans-1,2-Dichloroethene	10	Not Detected	40	Not Detected
Hexane	10	1700	35	5900
1,1-Dichloroethane	10	Not Detected	41	Not Detected
2-Butanone (Methyl Ethyl Ketone)	40	Not Detected	120	Not Detected
cis-1,2-Dichloroethene	10	11	40	44
Tetrahydrofuran	10	Not Detected	30	Not Detected
Chloroform	10	Not Detected	49	Not Detected
1,1,1-Trichloroethane	10	Not Detected	55	Not Detected
Cyclohexane	10	2100	34	7200
Carbon Tetrachloride	10	Not Detected	63	Not Detected
2,2,4-Trimethylpentane	10	220	47	1000
Benzene	10	330	32	1000
1,2-Dichloroethane	10	Not Detected	41	Not Detected
Heptane	10	5500 E	41	23000 E
Trichloroethene	10	Not Detected	54	Not Detected
1,2-Dichloropropane	10	Not Detected	46	Not Detected
1,4-Dioxane	40	Not Detected	140	Not Detected
Bromodichloromethane	10	Not Detected	67	Not Detected
cis-1,3-Dichloropropene	10	Not Detected	46	Not Detected
4-Methyl-2-pentanone	10	Not Detected	41	Not Detected
Toluene	20	60	76	230
trans-1,3-Dichloropropene	10	Not Detected	46	Not Detected
1,1,2-Trichloroethane	10	Not Detected	55	Not Detected
Tetrachloroethene	10	Not Detected	68	Not Detected
2-Hexanone	40	Not Detected	160	Not Detected

Client Sample ID: SGP-21

Lab ID#: 2410133B-29A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101430	Date of Collection:	9/30/24 2:40:00 PM
Dil. Factor:	20.1	Date of Analysis:	10/15/24 12:54 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	10	Not Detected	86	Not Detected
1,2-Dibromoethane (EDB)	10	Not Detected	77	Not Detected
Chlorobenzene	10	12	46	57
Ethyl Benzene	10	10	44	44
m,p-Xylene	20	50	87	220
o-Xylene	10	Not Detected	44	Not Detected
Styrene	10	Not Detected	43	Not Detected
Bromoform	10	Not Detected	100	Not Detected
Cumene	10	32	49	160
1,1,2,2-Tetrachloroethane	10	Not Detected	69	Not Detected
Propylbenzene	10	14	49	68
4-Ethyltoluene	10	Not Detected	49	Not Detected
1,3,5-Trimethylbenzene	10	Not Detected	49	Not Detected
1,2,4-Trimethylbenzene	10	10	49	50
1,3-Dichlorobenzene	10	Not Detected	60	Not Detected
1,4-Dichlorobenzene	10	Not Detected	60	Not Detected
alpha-Chlorotoluene	10	Not Detected	52	Not Detected
1,2-Dichlorobenzene	10	Not Detected	60	Not Detected
1,2,4-Trichlorobenzene	40	Not Detected	300	Not Detected
Hexachlorobutadiene	40	Not Detected	430	Not Detected
Naphthalene	20	Not Detected	100	Not Detected

E = Exceeds instrument calibration range.

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	92	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	101	70-130



Air Toxics

Client Sample ID: Duplicate-4

Lab ID#: 2410133B-30A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101431	Date of Collection:	9/30/24 12:35:00 PM
Dil. Factor:	21.0	Date of Analysis:	10/15/24 01:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	10	Not Detected	52	Not Detected
Freon 114	10	41	73	290
Chloromethane	100	Not Detected	220	Not Detected
Vinyl Chloride	10	13	27	34
1,3-Butadiene	10	Not Detected	23	Not Detected
Bromomethane	100	Not Detected	410	Not Detected
Chloroethane	42	Not Detected	110	Not Detected
Freon 11	10	Not Detected	59	Not Detected
Ethanol	100	Not Detected	200	Not Detected
Freon 113	10	Not Detected	80	Not Detected
1,1-Dichloroethene	10	Not Detected	42	Not Detected
Acetone	100	Not Detected	250	Not Detected
2-Propanol	42	Not Detected	100	Not Detected
Carbon Disulfide	42	Not Detected	130	Not Detected
3-Chloropropene	42	Not Detected	130	Not Detected
Methylene Chloride	100	Not Detected	360	Not Detected
Methyl tert-butyl ether	42	Not Detected	150	Not Detected
trans-1,2-Dichloroethene	10	Not Detected	42	Not Detected
Hexane	10	560	37	2000
1,1-Dichloroethane	10	Not Detected	42	Not Detected
2-Butanone (Methyl Ethyl Ketone)	42	Not Detected	120	Not Detected
cis-1,2-Dichloroethene	10	Not Detected	42	Not Detected
Tetrahydrofuran	10	Not Detected	31	Not Detected
Chloroform	10	Not Detected	51	Not Detected
1,1,1-Trichloroethane	10	Not Detected	57	Not Detected
Cyclohexane	10	250	36	870
Carbon Tetrachloride	10	Not Detected	66	Not Detected
2,2,4-Trimethylpentane	10	88	49	410
Benzene	10	240	34	770
1,2-Dichloroethane	10	Not Detected	42	Not Detected
Heptane	10	1300	43	5400
Trichloroethene	10	Not Detected	56	Not Detected
1,2-Dichloropropane	10	Not Detected	48	Not Detected
1,4-Dioxane	42	Not Detected	150	Not Detected
Bromodichloromethane	10	Not Detected	70	Not Detected
cis-1,3-Dichloropropene	10	Not Detected	48	Not Detected
4-Methyl-2-pentanone	10	Not Detected	43	Not Detected
Toluene	21	29	79	110
trans-1,3-Dichloropropene	10	Not Detected	48	Not Detected
1,1,2-Trichloroethane	10	Not Detected	57	Not Detected
Tetrachloroethene	10	Not Detected	71	Not Detected
2-Hexanone	42	Not Detected	170	Not Detected

Client Sample ID: Duplicate-4

Lab ID#: 2410133B-30A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101431	Date of Collection: 9/30/24 12:35:00 PM
Dil. Factor:	21.0	Date of Analysis: 10/15/24 01:18 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	10	Not Detected	89	Not Detected
1,2-Dibromoethane (EDB)	10	Not Detected	81	Not Detected
Chlorobenzene	10	810	48	3700
Ethyl Benzene	10	29	46	120
m,p-Xylene	21	66	91	290
o-Xylene	10	37	46	160
Styrene	10	Not Detected	45	Not Detected
Bromoform	10	Not Detected	110	Not Detected
Cumene	10	180	52	860
1,1,2,2-Tetrachloroethane	10	Not Detected	72	Not Detected
Propylbenzene	10	140	52	670
4-Ethyltoluene	10	Not Detected	52	Not Detected
1,3,5-Trimethylbenzene	10	Not Detected	52	Not Detected
1,2,4-Trimethylbenzene	10	16	52	79
1,3-Dichlorobenzene	10	Not Detected	63	Not Detected
1,4-Dichlorobenzene	10	46	63	270
alpha-Chlorotoluene	10	Not Detected	54	Not Detected
1,2-Dichlorobenzene	10	Not Detected	63	Not Detected
1,2,4-Trichlorobenzene	42	Not Detected	310	Not Detected
Hexachlorobutadiene	42	Not Detected	450	Not Detected
Naphthalene	21	Not Detected	110	Not Detected

Container Type: 6 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	98	70-130

Client Sample ID: Lab Blank

Lab ID#: 2410133B-31A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101406a	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 10:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

Client Sample ID: Lab Blank

Lab ID#: 2410133B-31A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101406a	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:47 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected
Naphthalene	1.0	Not Detected	5.2	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	96	70-130

Client Sample ID: CCV

Lab ID#: 2410133B-32A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:34 AM

Compound	%Recovery
Freon 12	88
Freon 114	85
Chloromethane	113
Vinyl Chloride	90
1,3-Butadiene	84
Bromomethane	93
Chloroethane	90
Freon 11	87
Ethanol	102
Freon 113	89
1,1-Dichloroethene	86
Acetone	91
2-Propanol	93
Carbon Disulfide	90
3-Chloropropene	78
Methylene Chloride	86
Methyl tert-butyl ether	78
trans-1,2-Dichloroethene	84
Hexane	76
1,1-Dichloroethane	82
2-Butanone (Methyl Ethyl Ketone)	85
cis-1,2-Dichloroethene	91
Tetrahydrofuran	83
Chloroform	86
1,1,1-Trichloroethane	85
Cyclohexane	84
Carbon Tetrachloride	87
2,2,4-Trimethylpentane	81
Benzene	100
1,2-Dichloroethane	96
Heptane	92
Trichloroethene	92
1,2-Dichloropropane	100
1,4-Dioxane	114
Bromodichloromethane	100
cis-1,3-Dichloropropene	91
4-Methyl-2-pentanone	81
Toluene	97
trans-1,3-Dichloropropene	94
1,1,2-Trichloroethane	98
Tetrachloroethene	107
2-Hexanone	76

Client Sample ID: CCV

Lab ID#: 2410133B-32A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101403	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:34 AM

Compound	%Recovery
Dibromochloromethane	103
1,2-Dibromoethane (EDB)	96
Chlorobenzene	97
Ethyl Benzene	95
m,p-Xylene	100
o-Xylene	91
Styrene	96
Bromoform	104
Cumene	91
1,1,2,2-Tetrachloroethane	97
Propylbenzene	98
4-Ethyltoluene	100
1,3,5-Trimethylbenzene	98
1,2,4-Trimethylbenzene	98
1,3-Dichlorobenzene	104
1,4-Dichlorobenzene	103
alpha-Chlorotoluene	85
1,2-Dichlorobenzene	99
1,2,4-Trichlorobenzene	89
Hexachlorobutadiene	91
Naphthalene	74

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	83	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCS

Lab ID#: 2410133B-33A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:57 AM

Compound	%Recovery	Method Limits
Freon 12	84	70-130
Freon 114	81	70-130
Chloromethane	112	70-130
Vinyl Chloride	88	70-130
1,3-Butadiene	84	70-130
Bromomethane	90	70-130
Chloroethane	88	70-130
Freon 11	83	70-130
Ethanol	94	70-130
Freon 113	85	70-130
1,1-Dichloroethene	78	70-130
Acetone	87	70-130
2-Propanol	94	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	74	70-130
Methylene Chloride	86	70-130
Methyl tert-butyl ether	78	70-130
trans-1,2-Dichloroethene	83	70-130
Hexane	76	70-130
1,1-Dichloroethane	81	70-130
2-Butanone (Methyl Ethyl Ketone)	83	70-130
cis-1,2-Dichloroethene	89	70-130
Tetrahydrofuran	89	70-130
Chloroform	85	70-130
1,1,1-Trichloroethane	87	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	86	70-130
2,2,4-Trimethylpentane	86	70-130
Benzene	98	70-130
1,2-Dichloroethane	94	70-130
Heptane	88	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	97	70-130
1,4-Dioxane	100	70-130
Bromodichloromethane	94	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	85	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	93	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	105	70-130
2-Hexanone	83	70-130

Client Sample ID: LCS

Lab ID#: 2410133B-33A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101404	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 09:57 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	92	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	95	70-130
m,p-Xylene	99	70-130
o-Xylene	90	70-130
Styrene	98	70-130
Bromoform	99	70-130
Cumene	89	70-130
1,1,2,2-Tetrachloroethane	93	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	98	70-130
1,2,4-Trimethylbenzene	98	70-130
1,3-Dichlorobenzene	101	70-130
1,4-Dichlorobenzene	100	70-130
alpha-Chlorotoluene	86	70-130
1,2-Dichlorobenzene	98	70-130
1,2,4-Trichlorobenzene	99	70-130
Hexachlorobutadiene	101	70-130
Naphthalene	84	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	85	70-130
4-Bromofluorobenzene	104	70-130

Client Sample ID: LCSD

Lab ID#: 2410133B-33AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:21 AM

Compound	%Recovery	Method Limits
Freon 12	82	70-130
Freon 114	79	70-130
Chloromethane	110	70-130
Vinyl Chloride	88	70-130
1,3-Butadiene	83	70-130
Bromomethane	91	70-130
Chloroethane	88	70-130
Freon 11	82	70-130
Ethanol	93	70-130
Freon 113	82	70-130
1,1-Dichloroethene	81	70-130
Acetone	83	70-130
2-Propanol	94	70-130
Carbon Disulfide	87	70-130
3-Chloropropene	75	70-130
Methylene Chloride	83	70-130
Methyl tert-butyl ether	76	70-130
trans-1,2-Dichloroethene	83	70-130
Hexane	74	70-130
1,1-Dichloroethane	78	70-130
2-Butanone (Methyl Ethyl Ketone)	82	70-130
cis-1,2-Dichloroethene	88	70-130
Tetrahydrofuran	85	70-130
Chloroform	83	70-130
1,1,1-Trichloroethane	85	70-130
Cyclohexane	85	70-130
Carbon Tetrachloride	84	70-130
2,2,4-Trimethylpentane	84	70-130
Benzene	95	70-130
1,2-Dichloroethane	93	70-130
Heptane	87	70-130
Trichloroethene	90	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	99	70-130
Bromodichloromethane	92	70-130
cis-1,3-Dichloropropene	88	70-130
4-Methyl-2-pentanone	82	70-130
Toluene	93	70-130
trans-1,3-Dichloropropene	92	70-130
1,1,2-Trichloroethane	95	70-130
Tetrachloroethene	104	70-130
2-Hexanone	83	70-130

Client Sample ID: LCSD

Lab ID#: 2410133B-33AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	91101405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 10:21 AM

Compound	%Recovery	Method Limits
Dibromochloromethane	96	70-130
1,2-Dibromoethane (EDB)	93	70-130
Chlorobenzene	96	70-130
Ethyl Benzene	95	70-130
m,p-Xylene	98	70-130
o-Xylene	90	70-130
Styrene	97	70-130
Bromoform	98	70-130
Cumene	89	70-130
1,1,2,2-Tetrachloroethane	91	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	99	70-130
1,3,5-Trimethylbenzene	97	70-130
1,2,4-Trimethylbenzene	97	70-130
1,3-Dichlorobenzene	100	70-130
1,4-Dichlorobenzene	99	70-130
alpha-Chlorotoluene	85	70-130
1,2-Dichlorobenzene	95	70-130
1,2,4-Trichlorobenzene	97	70-130
Hexachlorobutadiene	101	70-130
Naphthalene	86	60-140

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	102	70-130

Method : TO-15 + Naph

CAS Number	Compound	Rpt. Limit (ppbv)
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

Method : TO-15 + Naph

CAS Number	Compound	Rpt. Limit (ppbv)
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0
91-20-3	Naphthalene	1.0

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130



Air Toxics

Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Analysis Request / Canister Chain of Custody

Instructions



If no TAT is marked, EATL will proceed with Standard TAT

page 2 of 3

Workorder #: 2410133

Client: <u>SKME</u>	Project Name: <u>Cliffside LF</u>	Turnaround Time (Specify Below)	
Site Name: <u>Cliffside LF</u>	Project #: <u>23050454</u>	Standard _____ Rush _____ (Surcharges will apply, per availability)	Requested Date (mm/dd/yy): _____
Project Manager: <u>Tom Raymond/Jerry Paul</u>	PO#: _____	Requested Date (mm/dd/yy): _____	
Sampler: <u>Conner Hicks/James Waters</u>		QR Number of Days: _____	

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses	Canister Vacuum/Pressure			
				Date	Time	Date	Time		Lab Use Only			
									Initial (in Hg)	Final (in Hg)	Receipt (in Hg)	Final (in psi) Gas: N2 / He
117A	SGI-18	6L2486	23451	9/26/24	1000	9/26/24	1230					
188A	SGP-19	6L0856	24746		1030		1315					
198A	SGP-20	6L0818	26258		1100		1350					
208A	SGP-27	6L0745	24047		1140		1440					
218A	SGP-28	6L1225	25190		1210		1500					
228A	SGP-24	6L2844	23184		1245		1410					
238A	Duplicate - 3	6L1572	2442									
248A	SGI-26	6L2963	24537	9/30/24	0955	9/30/24	1215					
258A	SGT-25	6L1316	23345		1010		1235					
268A	SGP-24	6L0641	23728		1035		1309					
278A	SGP-23	6L0577	23117		1105		1330					
288A	SGP-22	6L0610	23140		1125		1410					

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation) <u>Car [Signature] SKME</u>	Date 9/26/24	Time 1700	Received by: (Signature/Affiliation) <u>[Signature] EATL</u>	Date 10/2/24	Time 1041
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Shipper Name: Fed Ex Custody Seals Intact? Yes No None Condition: _____

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

Analysis Request / Canister Chain of Custody

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
 Phone (800) 985-5955; Fax (916) 351-8279

PID: _____ For Laboratory Use Only
 Workorder #: 2410133

Click links below to view:
[Canister Sampling Guide](#)
[Helium Shroud Video](#)

Client: S+ME Inc. PID: _____
 Project Name: Cliffdale LF
 Project Manager: Tom Raymond/Jerry Paul P.O.# _____
 Sampler: James Waters/Connor Hicks
 Site Name: Cliffdale LF 23050459

Special Instructions/Notes:

Turnaround Time (Rush surcharges may apply)
 Select TAT from drop down box

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Lab Use Only		Requested Analyses	
				Date	Time	Date	Time			Receipt	Final (psig) Gas: N ₂ / He	TO-15	Method 194b
29A	SGP-21	6L1849	23399	9/30/24	1150	9/30/24	1440	30	6			✓	✓
30A	Duplicate-4	6L2169	23756	1	1010	1	1235	30	7			✓	✓

Relinquished by: (Signature/Affiliation) <u>James A. Waters</u>	Date <u>10/1/24</u>	Time <u>1200</u>	Received by: (Signature/Affiliation) <u>Zane Eaton</u>	Date <u>10.2.24</u>	Time <u>1041</u>
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Shipper Name: J. Hill Custody Seals Intact? Yes No None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

10/15/2024

Connor Hicks

S & ME, Inc.

3201 Spring Forest Road

Raleigh NC 27616

Project Name: Cliffdale LF

Project #: 23050459

Workorder #: 2410133C

Dear Connor Hicks

The following report includes the data for the above referenced project for sample(s) received on 10/2/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

WORK ORDER #: 2410133C

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/15/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
01A	SGP-1	Modified ASTM D-1946	7.1 "Hg	1.9 psi
02A	SGP-2	Modified ASTM D-1946	8.2 "Hg	1.9 psi
03A	SGP-3	Modified ASTM D-1946	6.5 "Hg	1.9 psi
04A	SGP-4	Modified ASTM D-1946	6.7 "Hg	1.9 psi
05A	SGP-5	Modified ASTM D-1946	7.1 "Hg	1.9 psi
06A	SGP-6	Modified ASTM D-1946	8.2 "Hg	1.9 psi
07A	SGP-7	Modified ASTM D-1946	7.3 "Hg	1.9 psi
08A	Duplicate-1	Modified ASTM D-1946	4.9 "Hg	1.9 psi
09A	SGP-8	Modified ASTM D-1946	11.2 "Hg	2 psi
10A	SGP-9	Modified ASTM D-1946	5.9 "Hg	1.8 psi
11A	SGP-10	Modified ASTM D-1946	6.5 "Hg	1.9 psi
12A	SGP-11	Modified ASTM D-1946	9.2 "Hg	1.8 psi
13A	SGP-12	Modified ASTM D-1946	6.7 "Hg	1.8 psi
14A	SGP-13	Modified ASTM D-1946	10.6 "Hg	1.9 psi
15A	SGP-14	Modified ASTM D-1946	8.2 "Hg	1.7 psi
16A	Duplicate-2	Modified ASTM D-1946	7.3 "Hg	2.1 psi
17A	SGP-18	Modified ASTM D-1946	7.6 "Hg	1.9 psi
18A	SGP-19	Modified ASTM D-1946	7.1 "Hg	1.9 psi
19A	SGP-20	Modified ASTM D-1946	7.3 "Hg	2 psi
20A	SGP-27	Modified ASTM D-1946	7.8 "Hg	2 psi
21A	SGP-28	Modified ASTM D-1946	9.4 "Hg	1.7 psi
22A	SGP-24	Modified ASTM D-1946	4.7 "Hg	2 psi
23A	Duplicate-3	Modified ASTM D-1946	6.3 "Hg	1.9 psi

Continued on next page

WORK ORDER #: 2410133C

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/15/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
24A	SGP-26	Modified ASTM D-1946	8.8 "Hg	2.2 psi
25A	SGP-25	Modified ASTM D-1946	8.2 "Hg	1.9 psi
26A	Lab Blank	Modified ASTM D-1946	NA	NA
26B	Lab Blank	Modified ASTM D-1946	NA	NA
27A	CCV	Modified ASTM D-1946	NA	NA
27B	CCV	Modified ASTM D-1946	NA	NA
28A	LCS	Modified ASTM D-1946	NA	NA
28AA	LCSD	Modified ASTM D-1946	NA	NA
28B	LCS	Modified ASTM D-1946	NA	NA
28BB	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 10/15/24

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2703122, NH NELAP-209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
 Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

LABORATORY NARRATIVE
Modified ASTM D-1946
S & ME, Inc.
Workorder# 2410133C

Twenty-five 6 Liter Summa Canister samples were received on October 02, 2024. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane in air using GC/FID. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

Client Sample ID: SGP-1

Lab ID#: 2410133C-01A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	22

Client Sample ID: SGP-2

Lab ID#: 2410133C-02A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	49

Client Sample ID: SGP-3

Lab ID#: 2410133C-03A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	2.4

Client Sample ID: SGP-4

Lab ID#: 2410133C-04A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	41

Client Sample ID: SGP-5

Lab ID#: 2410133C-05A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	42

Client Sample ID: SGP-6

Lab ID#: 2410133C-06A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	65

**Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

Client Sample ID: SGP-7

Lab ID#: 2410133C-07A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	63

Client Sample ID: Duplicate-1

Lab ID#: 2410133C-08A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	0.48

Client Sample ID: SGP-8

Lab ID#: 2410133C-09A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00018	64

Client Sample ID: SGP-9

Lab ID#: 2410133C-10A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	60

Client Sample ID: SGP-10

Lab ID#: 2410133C-11A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	56

Client Sample ID: SGP-11

Lab ID#: 2410133C-12A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	58

**Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

Client Sample ID: SGP-12

Lab ID#: 2410133C-13A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	63

Client Sample ID: SGP-13

Lab ID#: 2410133C-14A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00018	0.00022

Client Sample ID: SGP-14

Lab ID#: 2410133C-15A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Client Sample ID: Duplicate-2

Lab ID#: 2410133C-16A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Client Sample ID: SGP-18

Lab ID#: 2410133C-17A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	57

Client Sample ID: SGP-19

Lab ID#: 2410133C-18A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

**Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

Client Sample ID: SGP-20

Lab ID#: 2410133C-19A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Client Sample ID: SGP-27

Lab ID#: 2410133C-20A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	58

Client Sample ID: SGP-28

Lab ID#: 2410133C-21A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	5.8

Client Sample ID: SGP-24

Lab ID#: 2410133C-22A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	14

Client Sample ID: Duplicate-3

Lab ID#: 2410133C-23A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	59

Client Sample ID: SGP-26

Lab ID#: 2410133C-24A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	61

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SGP-25

Lab ID#: 2410133C-25A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63



Air Toxics

Client Sample ID: SGP-1

Lab ID#: 2410133C-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101415	Date of Collection:	9/24/24 3:00:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/14/24 03:45 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	22

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-2

Lab ID#: 2410133C-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101416	Date of Collection:	9/24/24 2:25:00 PM
Dil. Factor:	1.55	Date of Analysis:	10/14/24 04:17 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	49

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-3

Lab ID#: 2410133C-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101415	Date of Collection:	9/24/24 3:20:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/14/24 03:44 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	2.4

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-4

Lab ID#: 2410133C-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101417	Date of Collection:	9/24/24 3:40:00 PM
Dil. Factor:	1.46	Date of Analysis:	10/14/24 04:41 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	41

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-5

Lab ID#: 2410133C-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101418	Date of Collection:	9/24/24 4:10:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/14/24 05:13 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	42

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-6

Lab ID#: 2410133C-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101419	Date of Collection:	9/24/24 4:20:00 PM
Dil. Factor:	1.55	Date of Analysis:	10/14/24 05:44 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	65

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-7

Lab ID#: 2410133C-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101420	Date of Collection:	9/24/24 4:30:00 PM
Dil. Factor:	1.50	Date of Analysis:	10/14/24 06:12 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	63

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Duplicate-1

Lab ID#: 2410133C-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101416	Date of Collection:	9/24/24 12:55:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/14/24 04:16 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	0.48

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-8

Lab ID#: 2410133C-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101421	Date of Collection:	9/25/24 12:10:00 PM
Dil. Factor:	1.82	Date of Analysis:	10/14/24 06:40 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00018	64

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-9

Lab ID#: 2410133C-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101404	Date of Collection:	9/25/24 1:10:00 PM
Dil. Factor:	1.40	Date of Analysis:	10/14/24 10:40 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	60

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-10

Lab ID#: 2410133C-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101405	Date of Collection:	9/25/24 3:15:00 PM
Dil. Factor:	1.44	Date of Analysis:	10/14/24 11:10 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	56

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-11

Lab ID#: 2410133C-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101406	Date of Collection:	9/25/24 2:20:00 PM
Dil. Factor:	1.62	Date of Analysis:	10/14/24 11:33 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	58

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-12

Lab ID#: 2410133C-13A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101407	Date of Collection:	9/25/24 2:25:00 PM
Dil. Factor:	1.45	Date of Analysis:	10/14/24 12:02 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	63

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-13

Lab ID#: 2410133C-14A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101418	Date of Collection:	9/25/24 1:40:00 PM
Dil. Factor:	1.75	Date of Analysis:	10/14/24 05:12 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00018	0.00022

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-14

Lab ID#: 2410133C-15A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101409	Date of Collection:	9/25/24 3:40:00 PM
Dil. Factor:	1.53	Date of Analysis:	10/14/24 01:03 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Duplicate-2

Lab ID#: 2410133C-16A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101410	Date of Collection:	9/25/24 3:05:00 PM
Dil. Factor:	1.51	Date of Analysis:	10/14/24 01:29 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-18

Lab ID#: 2410133C-17A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101411	Date of Collection:	9/26/24 12:30:00 PM
Dil. Factor:	1.51	Date of Analysis:	10/14/24 02:01 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	57

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-19

Lab ID#: 2410133C-18A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101412	Date of Collection:	9/26/24 1:15:00 PM
Dil. Factor:	1.48	Date of Analysis:	10/14/24 02:26 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-20

Lab ID#: 2410133C-19A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101413	Date of Collection:	9/26/24 1:50:00 PM
Dil. Factor:	1.50	Date of Analysis:	10/14/24 02:50 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	56

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-27

Lab ID#: 2410133C-20A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101414	Date of Collection:	9/26/24 2:40:00 PM
Dil. Factor:	1.53	Date of Analysis:	10/14/24 03:19 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	58

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-28

Lab ID#: 2410133C-21A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101404	Date of Collection:	9/26/24 3:00:00 PM
Dil. Factor:	1.62	Date of Analysis:	10/14/24 10:37 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	5.8

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-24

Lab ID#: 2410133C-22A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101405	Date of Collection:	9/26/24 2:10:00 PM
Dil. Factor:	1.35	Date of Analysis:	10/14/24 11:05 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	14

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Duplicate-3

Lab ID#: 2410133C-23A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101406	Date of Collection:	9/26/24
Dil. Factor:	1.43	Date of Analysis:	10/14/24 11:31 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	59

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-26

Lab ID#: 2410133C-24A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101407	Date of Collection:	9/30/24 12:15:00 PM
Dil. Factor:	1.62	Date of Analysis:	10/14/24 11:59 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	61

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-25

Lab ID#: 2410133C-25A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101408	Date of Collection:	9/30/24 12:35:00 PM
Dil. Factor:	1.55	Date of Analysis:	10/14/24 12:32 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2410133C-26A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 09:59 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2410133C-26B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 09:58 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2410133C-27A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101401	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:31 AM

Compound	%Recovery
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Methane	96
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Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2410133C-27B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101401	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:29 AM

Compound	%Recovery
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Methane	97
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Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2410133C-28A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:59 AM

Compound	%Recovery	Method Limits
Methane	97	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2410133C-28AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	10101425	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:41 PM

Compound	%Recovery	Method Limits
Methane	97	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2410133C-28B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:58 AM

Compound	%Recovery	Method Limits
Methane	98	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2410133C-28BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101419	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 05:43 PM

Compound	%Recovery	Method Limits
Methane	98	85-115

Container Type: NA - Not Applicable

Method : Modified ASTM D-1946 (Sh)-CH4 only

CAS Number	Compound	Rpt. Limit (%)
74-82-8	Methane	0.00010

Analysis Request / Canister Chain of Custody

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
 Phone (800) 985-5955; Fax (916) 351-8279

For Laboratory Use Only
 PID: _____ Workorder #: 2410133

Click links below to view:
[Canister Sampling Guide](#)
[Helium Shroud Video](#)

Client: S+ME Inc. PID: _____
 Project Name: Cliffdale LF
 Project Manager: Tom Raymond, Jerry Paul P.O.# _____
 Sampler: James Waters / Connor Hicks
 Site Name: Cliffdale LF 23050459

Special Instructions/Notes:

Turnaround Time (Rush surcharges may apply)
 Select TAT from drop down box

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Lab Use Only		Requested Analyses
				Date	Time	Date	Time			Receipt	Final (psig) Gas: N ₂ / He	
01A	SGP-1	GL1296	23793	9/24/24	1050	9/24/24	1500	30	7			10-15 Method 1946
02A	SGP-2	GL1538	24406		1125		1425	28	7			
03A	SGP-3	GL1632	23578		1200		1520	29	3			
04A	SGP-4	GL0832	23618		1230		1540	29	5			
05A	SGP-5	GL0658	24143		1315		1610	30	5			
06A	SGI-6	GL3748	23996		1330		1620	30	6			
07A	SGP-7	GL0316	23106		1410		1630	30	7			
08A	Duplicate-1	GL1590	24884		1200		1255	28	3			
09A	SGP-8	GL0502	23971	9/25/24	0945	9/25/24	1210	28	5			
10A	SGP-9	GL1357	23505		1020		1310	30	6			
11A	SGP-10	GL2346	26251		1235		1515	29	5			
12A	SGP-11	GL0986	24704		1200		1420	30	3			
13A	SGI-12	GL1147	23356		1115		1425	30	5			
14A	SGP-13	GL1577	24316		1055		1340	30	6			
15A	SGP-14	GL0135	23268		1315		1540	30	6			
16A	Duplicate-2	GL0387	23755		1200		1505	27	7			

Relinquished by: (Signature/Affiliation) <u>James A. Waters</u>	Date <u>10/1/24</u>	Time <u>1200</u>	Received by: (Signature/Affiliation) <u>2N55 EATC</u>	Date <u>10.2.24</u>	Time <u>1041</u>
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only
 Shipper Name: Fel Ex Custody Seals Intact? Yes No None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922



Air Toxics

Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Analysis Request / Canister Chain of Custody

Workorder #:

2410133

Instructions



If no TAT is marked, EATL will proceed with Standard TAT

page 2 of 3

Client: SMME
 Site Name: Cliffdale LF
 Project Manager: Tom Raymond/Jerry Paul
 Sampler: Conner Hicks/James Waters

Project Name: Cliffdale LF
 Project #: 23050459
 PO#:

Turnaround Time (Specify Below)
 Standard _____ Rush _____ (Surcharges will apply, per availability)
 Samples received after 3PM PST are considered to be received on the following workday. Requested Date (mm/dd/yy): _____
 QR Number of Days: _____

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses	Canister Vacuum/Pressure		Lab Use Only		
				Date	Time	Date	Time		Initial (in Hg)	Final (in Hg)	Receipt (in Hg)	Final (in psi) Gas: N2 / He	
17A	SGI-18	6L2486	23451	9/26/24	1000	9/26/24	1230	10-15	M 1946	30	6		
18A	SGP-19	6L0856	24746		1030		1315			30	6		
19A	SGP-20	6L0818	26258		1100		1350			30	7		
20A	SGP-27	6L0745	24047		1140		1440			30	6		
21A	SGP-28	6L1225	25190		1210		1500			30	6		
22A	SGP-24	6L2844	23184		1245		1410			30	6		
23A	Duplicate - 3	6L1572	2442	↓		↓				20	6		
24A	SGI-26	6L2963	24537	9/30/24	0955	9/30/24	1215	✓	✓	30	5		
25A	SGT-25	6L1316	23345	↓	1010	↓	1235	✓	✓	30	2		
26A	SGP-24	6L0641	23728	↓	1035	↓	1309	✓	✓	29	7		
27A	SGP-23	6L0575	23117	↓	1105	↓	1330	✓	✓	30	5		
28A	SGP-22	6L0610	23140	↓	1125	↓	1410	✓	✓	30	5		
										28	6		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation) <u>Car [Signature] SMME</u>	Date 9/26/24	Time 1700	Received by: (Signature/Affiliation) <u>[Signature] EATL</u>	Date 10.2.24	Time 1041
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Shipper Name: Fed Ex Custody Seals Intact? Yes No None Condition: _____

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

10/15/2024

Connor Hicks

S & ME, Inc.

3201 Spring Forest Road

Raleigh NC 27616

Project Name: Cliffdale LF

Project #: 23050459

Workorder #: 2410133D

Dear Connor Hicks

The following report includes the data for the above referenced project for sample(s) received on 10/2/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brian Whittaker at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Brian Whittaker

Project Manager

WORK ORDER #: 2410133D

Work Order Summary

CLIENT:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616	BILL TO:	Connor Hicks S & ME, Inc. 3201 Spring Forest Road Raleigh, NC 27616
PHONE:	919-872-2660	P.O. #	
FAX:	919-790-8909	PROJECT #	23050459 Cliffdale LF
DATE RECEIVED:	10/02/2024	CONTACT:	Brian Whittaker
DATE COMPLETED:	10/15/2024		

<u>FRACTION #</u>	<u>NAME</u>	<u>TEST</u>	<u>RECEIPT VAC./PRES.</u>	<u>FINAL PRESSURE</u>
26A	SGP-24	Modified ASTM D-1946	6.1 "Hg	1.7 psi
27A	SGP-23	Modified ASTM D-1946	8.6 "Hg	1.8 psi
28A	SGP-22	Modified ASTM D-1946	9 "Hg	1.7 psi
29A	SGP-21	Modified ASTM D-1946	7.3 "Hg	2.1 psi
30A	Duplicate-4	Modified ASTM D-1946	8.6 "Hg	1.8 psi
31A	Lab Blank	Modified ASTM D-1946	NA	NA
32A	CCV	Modified ASTM D-1946	NA	NA
33A	LCS	Modified ASTM D-1946	NA	NA
33AA	LCSD	Modified ASTM D-1946	NA	NA

CERTIFIED BY: 

 Technical Director

DATE: 10/15/24

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP-02089, MN NELAP-2703122, NH NELAP-209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
 Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.
 180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000

LABORATORY NARRATIVE
Modified ASTM D-1946
S & ME, Inc.
Workorder# 2410133D

Five 6 Liter Summa Canister samples were received on October 02, 2024. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane in air using GC/FID. The method involves direct injection of 1.0 mL of sample.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

<i>Requirement</i>	<i>ASTM D-1946</i>	<i>ATL Modifications</i>
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by ATL are blended to a $\geq 95\%$ accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25% RPD for detections > 5 X's the RL.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946**

Client Sample ID: SGP-24

Lab ID#: 2410133D-26A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	62

Client Sample ID: SGP-23

Lab ID#: 2410133D-27A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63

Client Sample ID: SGP-22

Lab ID#: 2410133D-28A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	58

Client Sample ID: SGP-21

Lab ID#: 2410133D-29A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	32

Client Sample ID: Duplicate-4

Lab ID#: 2410133D-30A

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63



Air Toxics

Client Sample ID: SGP-24

Lab ID#: 2410133D-26A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101409	Date of Collection:	9/30/24 1:09:00 PM
Dil. Factor:	1.40	Date of Analysis:	10/14/24 01:01 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00014	62

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-23

Lab ID#: 2410133D-27A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101410	Date of Collection:	9/30/24 1:30:00 PM
Dil. Factor:	1.57	Date of Analysis:	10/14/24 01:27 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-22

Lab ID#: 2410133D-28A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101411	Date of Collection:	9/30/24 2:10:00 PM
Dil. Factor:	1.59	Date of Analysis:	10/14/24 02:00 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	58

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: SGP-21

Lab ID#: 2410133D-29A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101412	Date of Collection:	9/30/24 2:40:00 PM
Dil. Factor:	1.51	Date of Analysis:	10/14/24 02:25 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00015	32

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Duplicate-4

Lab ID#: 2410133D-30A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101413	Date of Collection:	9/30/24 12:35:00 PM
Dil. Factor:	1.57	Date of Analysis:	10/14/24 02:49 PM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00016	63

Container Type: 6 Liter Summa Canister



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2410133D-31A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101403	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	10/14/24 09:58 AM

Compound	Rpt. Limit (%)	Amount (%)
Methane	0.00010	Not Detected

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: CCV

Lab ID#: 2410133D-32A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101401	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:29 AM

Compound	%Recovery
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Methane	97
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Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2410133D-33A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101402	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 08:58 AM

Compound	%Recovery	Method Limits
Methane	98	85-115

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2410133D-33AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

File Name:	11101419	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 10/14/24 05:43 PM

Compound	%Recovery	Method Limits
Methane	98	85-115

Container Type: NA - Not Applicable

Method : Modified ASTM D-1946 (Sh)-CH4 only

CAS Number	Compound	Rpt. Limit (%)
74-82-8	Methane	0.00010



Air Toxics

Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Analysis Request / Canister Chain of Custody

Workorder #: 2410133

Instructions



If no TAT is marked, EATL will proceed with Standard TAT

page 2 of 3

Client: <u>SKME</u>	Project Name: <u>Cliffside LF</u>	Turnaround Time (Specify Below)	
Site Name: <u>Cliffside LF</u>	Project #: <u>23050454</u>	Standard _____ Rush _____ (Surcharges will apply, per availability)	Requested Date (mm/dd/yy): _____
Project Manager: <u>Tom Raymond/Jerry Paul</u>	PO#: _____	Requested Date (mm/dd/yy): _____	
Sampler: <u>Conner Hicks/James Waters</u>		QR Number of Days: _____	

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses	Canister Vacuum/Pressure			
				Date	Time	Date	Time		Lab Use Only			
									Initial (in Hg)	Final (in Hg)	Receipt (in Hg)	Final (in psi) Gas: N2 / He
117A	SGI-18	6L2486	23451	9/26/24	1000	9/26/24	1230		30	6		
188A	SGP-19	6L0856	24746		1030		1315		30	6		
198A	SGP-20	6L0818	26258		1100		1350		30	7		
208A	SGP-27	6L0745	24047		1140		1440		30	6		
218A	SGP-28	6L1225	25190		1210		1500		30	6		
228A	SGP-24	6L2844	23184		1245		1410		20	6		
238A	Duplicate - 3	6L1572	2442						30	5		
248A	SGI-26	6L2963	24537	9/30/24	0955	9/30/24	1215		30	2		
258A	SGT-25	6L1316	23345		1010		1235		29	7		
268A	SGP-24	6L0641	23728		1035		1309		30	5		
278A	SGP-23	6L0577	23117		1105		1330		30	5		
288A	SGP-22	6L0610	23140		1125		1410		28	6		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation) <u>Car [Signature] SKME</u>	Date 9/26/24	Time 1700	Received by: (Signature/Affiliation) <u>[Signature] EATL</u>	Date 10/2/24	Time 1041
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Shipper Name: Fed Ex Custody Seals Intact? Yes No None Condition: _____

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922



Air Toxics

Analysis Request / Canister Chain of Custody

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

PID: _____ For Laboratory Use Only
Workorder #: 2410133

Click links below to view:
[Canister Sampling Guide](#)
[Helium Shroud Video](#)

1 of 1
3 of 3

Client: S+ME Inc. PID: _____
Project Name: Cliffdale LF
Project Manager: Tom Raymond/Jerry Paul P.O.# _____
Sampler: James Waters/Connor Hicks
Site Name: Cliffdale LF 23050459

Special Instructions/Notes:

Turnaround Time (Rush surcharges may apply)
Select TAT from drop down box

Canister Vacuum/Pressure		Lab Use Only		Requested Analyses	
Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N ₂ / He	TO-15	Method 194b

Lab ID	Sample Identification	Can #	Flow Controller #	Start Sampling Information		Stop Sampling Information		Initial (in Hg)	Final (in Hg)	Receipt	Final (psig) Gas: N ₂ / He	TO-15	Method 194b
				Date	Time	Date	Time						
29A	SGP-21	6L1849	23399	9/30/24	1150	9/30/24	1440	30	6				
30A	Duplicate-4	6L2169	23756	1	1010	1	1235	30	7				

Relinquished by: (Signature/Affiliation) <i>James A. Waters</i>	Date <u>10/1/24</u>	Time <u>1200</u>	Received by: (Signature/Affiliation) <i>Matthew EATL</i>	Date <u>10.2.24</u>	Time <u>1041</u>
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Shipper Name: Jill K Custody Seals Intact? Yes No None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922



October 11, 2024



S&ME
ATTN: Jerry Paul
3201 Spring Forest Rd.
Raleigh, NC 27616

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
ASTM D1946, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175
ALASKA CS-LAP 24-002
EPA Methods TO14A, TO15

LABORATORY TEST RESULTS

Project Reference: Cliffdale Landfill
Project Number: 23050459
Lab Number: R092501-01/08

Enclosed are results for sample(s) received 9/25/24 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jerry Paul and Tom Raymond on 10/10/24.


ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink that reads "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

 <p>18501 E. Gale Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5832</p>	CHAIN OF CUSTODY RECORD										
	TURNAROUND TIME Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> 96 hours <input type="checkbox"/> Other: _____	DELIVERABLES EDD <input type="checkbox"/> EDF <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/>	PAGE: / OF / Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C								
Project No.: <u>23050459</u> Project Name: <u>Cliffdale LF</u> Report To: <u>Tom Raymond, Jerry Paul</u> Company: <u>STME</u> Street: <u>2724 Discovery Drive</u> City/State/Zip: <u>Raleigh NC 27616</u> Phone& Fax: <u>919-872-2660</u> e-mail: <u>traymond@sminc.com, jpaul@sminc.com</u>	BILLING		ANALYSIS REQUEST								
		P.O. No.: <u>Same</u> Bill to: _____		Hydrogen Sulfide (Gas) (Low Level) ASTM Method D5504							
LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION					
	<u>R092501 -01</u>	<u>9/24/24</u>	<u>1430</u>	<u>Tedlar Bag</u>	<u>Gas</u>	<u>None</u>	<input checked="" type="checkbox"/>				
	<u>-02</u>		<u>1505</u>								
	<u>-03</u>		<u>1525</u>								
	<u>-04</u>		<u>1545</u>								
	<u>-05</u>		<u>1610</u>								
	<u>-06</u>		<u>1620</u>								
	<u>-07</u>		<u>1630</u>								
	<u>-08</u>		<u>1525</u>								
	<u>Duplicate-1</u>										
Form-24 Rev. 1 AUTHORIZATION TO PERFORM WORK _____ COMPANY _____ DATE/TIME _____				QA Manager 2/22/10							
SAMPLED BY <u>James Waters</u> COMPANY <u>STME</u> DATE/TIME <u>9/24/24</u>				* H ₂ S ASTM Method D5504 Low Level							
RELINQUISHED BY <u>James A. Waters</u> DATE/TIME <u>9/24/24 1815</u>		RECEIVED BY _____ DATE/TIME _____									
RELINQUISHED BY <u>James A. Waters</u> DATE/TIME <u>9/25/24 0820</u>		RECEIVED BY <u>James A. Waters</u> DATE/TIME <u>9/25/24 0820</u>									
RELINQUISHED BY _____ DATE/TIME _____		RECEIVED BY _____ DATE/TIME _____									
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____											

Client: S&ME
Attn: Jerry Paul
Project Name: Cliffdale Landfill
Project No.: 23050459
Date Received: 09/25/24
Matrix: Air
Reporting Units: ppmv

ASTM D5504

Lab No.:	R092501-01	R092501-02	R092501-03	R092501-04				
Client Sample I.D.:	SGP-2	SGP-1	SGP-3	SGP-4				
Date/Time Sampled:	9/24/24 14:30	9/24/24 15:05	9/24/24 15:25	9/24/24 15:45				
Date/Time Analyzed:	9/25/24 19:55	9/25/24 20:11	9/25/24 18:35	9/25/24 12:45				
QC Batch No.:	240925GC3A2	240925GC3A2	240925GC3A2	240925GC3A1				
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD				
Dilution Factor:	10	10	1.0	1.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	14	2.0	96	2.0	1.9	0.20	0.29 E	0.0050

ND = Not Detected (below RL)

RL = Reporting Limit

E = Estimated value. Exceeds instrument calibration range.

Reviewed/Approved By: *Amirika Salas Sanchez*
 Mark Johnson
 Operations Manager

Date 10-10-24

The cover letter is an integral part of this analytical report



Client: S&ME
Attn: Jerry Paul
Project Name: Cliffdale Landfill
Project No.: 23050459
Date Received: 09/25/24
Matrix: Air
Reporting Units: ppmv

ASTM D5504

Lab No.:	R092501-05	R092501-06	R092501-07	R092501-08					
Client Sample I.D.:	SGP-5	SGI-6	SGP-7	Duplicate-1					
Date/Time Sampled:	9/24/24 16:10	9/24/24 16:20	9/24/24 16:30	9/24/24 15:25					
Date/Time Analyzed:	9/25/24 12:56	9/25/24 19:07	9/25/24 13:41	9/25/24 19:39					
QC Batch No.:	240925GC3A1	240925GC3A2	240925GC3A2	240925GC3A2					
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD					
Dilution Factor:	1.0	1.0	100	1.0					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	
Hydrogen Sulfide	0.21	0.0050	9.1	0.20	27	E	0.50	6.3	0.20

ND = Not Detected (below RL)

RL = Reporting Limit

E = Estimated value. Exceeds instrument calibration range.

Reviewed/Approved By: *Mark Johnson*
 Mark Johnson
 Operations Manager

Date 10-10-24

The cover letter is an integral part of this analytical report



QC Batch No.: 240925GC3A1

Matrix: Air

Reporting Units: ppmv

ASTM D5504

Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	9/25/24 10:30			9/25/24 15:25		9/25/24 15:57					
Analyst Initials:	AS/KD			AS/KD		AS/KD					
Dilution Factor:	1.0			1.0		1.0					
								Limits			
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.0050	0.0570	0.0741	130	0.0735	129	0.8	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: *Mark Johnson*
 Mark Johnson
 Operations Manager

Date 10-10-24

The cover letter is an integral part of this analytical report



QC Batch No.: 240925GC3A2

Matrix: Air

Reporting Units: ppmv

ASTM D5504

Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	9/25/24 17:32			9/25/24 17:00		9/25/24 17:16					
Analyst Initials:	AS/KD			AS/KD		AS/KD					
Dilution Factor:	1.0			1.0		1.0					
									Limits		
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.20	1.14	1.14	100	1.15	101	1.5	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: 
Mark Johnson
Operations Manager

Date: 10-10-24

The cover letter is an integral part of this analytical report





October 16, 2024



S&ME
ATTN: Jerry Paul
3201 Spring Forest Rd.
Raleigh, NC 27616

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
ASTM D1946, RSK-175
TX Cert T104704450-14-6
EPA Methods TO14A, TO15
UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175
ALASKA CS-LAP 24-002
EPA Methods TO14A, TO15

LABORATORY TEST RESULTS

Project Reference: Cliffdale Landfill
Project Number: 23050459
Lab Number: R092602-01/08

Enclosed are results for sample(s) received 9/26/24 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jerry Paul and Tom Raymond on 10/15/24.


ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink that reads "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

 <p style="margin-top: 10px;">18501 E. Gale Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5832</p>	CHAIN OF CUSTODY RECORD		
	TURNAROUND TIME Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> 96 hours <input type="checkbox"/> Other: _____	DELIVERABLES EDD <input type="checkbox"/> EDF <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/>	PAGE: 1 OF 1 Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C

Project No.: 23050459

Project Name: Cliftdale LF

Report To: Tom Raymond, Jerry Paul

Company: S+ME

Street: 3724 Discovery Drive

City/State/Zip: Raleigh NC 27616

Phone& Fax: 919-872-2660

e-mail: traymond@smeline.com, jpaul@smeline.com

BILLING P.O. No.: Same Bill to:	ANALYSIS REQUEST <div style="border: 1px solid black; padding: 5px; width: fit-content;"> Hydrogen sulfide (H₂S) *ASTM Method 05504 (Low Level) </div>
--	--

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION				
R092602-01	SGP-8	9/25/24	1355	1cdlar Bag	Gas	None	✓			
-02	SGP-9		1400							
-03	SGP-10	1530	1530							
-04	SGP-11		1515							
-05	SGI-12		1430							
-06	SGP-13		1410							
-07	SGP-14		1545							
-08	Duplicate-2		1515							

Form-24 Rev. 1		QA Manager 2/22/10
AUTHORIZATION TO PERFORM WORK COMPANY: S+ME DATE/TIME:	SAMPLED BY: James Walker COMPANY: S+ME DATE/TIME: 9/25/24	COMMENTS * H ₂ S ASTM Method 05504 Low Level
RELINQUISHED BY: James A. Walker DATE/TIME: 9/25/24 1800	RECEIVED BY: [Signature] DATE/TIME: 9/25/24	
RELINQUISHED BY: FedEx DATE/TIME: 9/25/24 0709	RECEIVED BY: [Signature] DATE/TIME: 9/25/24 0709	
RELINQUISHED BY:	RECEIVED BY:	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____		

Client: S&ME
 Attn: Jerry Paul
 Project Name: Cliffdale Landfill
 Project No.: 23050459
 Date Received: 09/26/24
 Matrix: Air
 Reporting Units: ppmv

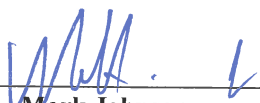
ASTM D5504

Lab No.:	R092602-01	R092602-02	R092602-03	R092602-04				
Client Sample I.D.:	SGP-8	SGP-9	SGP-10	SGP-11				
Date/Time Sampled:	9/25/24 13:50	9/25/24 14:00	9/25/24 15:20	9/25/24 15:15				
Date/Time Analyzed:	9/26/24 10:12	9/26/24 10:06	9/26/24 11:39	9/26/24 10:31				
QC Batch No.:	240926GC3A1	240926GC3A1	240926GC3A1	240926GC3A1				
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD				
Dilution Factor:	10	1.0	10	1.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	20	2.0	0.22	0.20	17	2.0	12	0.20

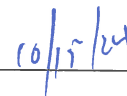
ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date _____



The cover letter is an integral part of this analytical report



Client: S&ME
 Attn: Jerry Paul
 Project Name: Cliffdale Landfill
 Project No.: 23050459
 Date Received: 09/26/24
 Matrix: Air
 Reporting Units: ppmv


ASTM D5504

Lab No.:	R092602-05	R092602-06	R092602-07	R092602-08				
Client Sample I.D.:	SGI-12	SGP-13	SGP-14	Duplicate-2				
Date/Time Sampled:	9/25/24 14:30	9/25/24 14:10	9/25/24 15:45	9/25/24 15:15				
Date/Time Analyzed:	9/26/24 11:23	9/26/24 18:21	9/26/24 10:49	9/26/24 10:37				
QC Batch No.:	240926GC3A1	240926GC3A2	240926GC3A1	240926GC3A1				
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD				
Dilution Factor:	10	1.0	1.0	1.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	23	2.0	ND	0.0050	3.1	0.20	11	0.20

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date _____

10/15/24

The cover letter is an integral part of this analytical report



QC Batch No.: 240926GC3A1

Matrix: Air

Reporting Units: ppmv

ASTM D5504

Lab No.:	METHOD BLANK	LCS		LCSD		Limits					
Date/Time Analyzed:	9/26/24 9:18	9/26/24 11:56		9/26/24 12:12							
Analyst Initials:	AS/KD	AS/KD		AS/KD							
Dilution Factor:	1.0	1.0		1.0							
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.20	1.14	1.12	98	1.13	99	1.2	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

[Signature]
Mark Johnson
Operations Manager

Date _____

[Signature]

The cover letter is an integral part of this analytical report



QC Batch No.: 240926GC3A2

Matrix: Air

Reporting Units: ppmv

ASTM D5504

Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	9/26/24 17:31			9/26/24 18:43		9/26/24 19:05					
Analyst Initials:	AS/KD			AS/KD		AS/KD					
Dilution Factor:	1.0			1.0		1.0					
									Limits		
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.0050	0.0570	0.0634	111	0.0628	110	1.0	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson

Mark Johnson
Operations Manager

Date _____

10/15/24

The cover letter is an integral part of this analytical report





October 21, 2024



S&ME
ATTN: Jerry Paul
3201 Spring Forest Rd.
Raleigh, NC 27616

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
ASTM D1946, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

ALASKA CS-LAP 24-002
EPA Methods TO14A, TO15

LABORATORY TEST RESULTS

Project Reference: Cliffdale Landfill
Project Number: 23050459
Lab Number: R100101-01/07

Enclosed are results for sample(s) received 10/01/24 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jerry Paul and Tom Raymond on 10/18/24.


ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink, appearing to read "MJA-1".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.

		18501 E. Gale Ave., Suite 130 City of Industry, CA 91748 Ph: 626-964-4032 Fx: 626-964-5832		CHAIN OF CUSTODY RECORD					
		TURNAROUND TIME Standard <input type="checkbox"/> 48 hours <input type="checkbox"/> Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input checked="" type="checkbox"/> 96 hours <input type="checkbox"/> Other: <i>HT 10/1/24</i>		DELIVERABLES EDD <input type="checkbox"/> EDF <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/>		PAGE: / OF / Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C			
Project No.: <i>AD 10/1/24</i> <i>S+ME Inc 23050459</i>		Project Name: <i>Cliffdale LF</i>		BILLING		ANALYSIS REQUEST			
Report To: <i>Tom Raymond, Jerry Paul</i>		Company: <i>S+ME</i>		P.O. No.: <i>Same</i>					
Street: <i>2724 Discovery Dr.</i>		Bill to:							
City/State/Zip: <i>Raleigh NC 27616</i>									
Phone & Fax: <i>919-872-2660</i>									
e-mail: <i>traymond@smeinc.com, jrpaul@smeinc.com</i>									
LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	<i>Hydrogen Sulfide (H₂S) Low Level ASTM Method D5504 (Level)</i>		
<i>R100101-01</i>	<i>SGI-24</i>	<i>9/30/24</i>	<i>1220</i>	<i>FedEx Bag</i>	<i>Gas</i>	<i>None</i>	<input checked="" type="checkbox"/>		
<i>-02</i>	<i>SGI-25</i>	<i> </i>	<i>1246</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
<i>-03</i>	<i>SGI-24</i>	<i> </i>	<i>1315</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
<i>-04</i>	<i>SGI-23</i>	<i> </i>	<i>1335</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
<i>-05</i>	<i>SGI-22</i>	<i>1415</i>	<i>1440</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
<i>-06</i>	<i>Duplicate - 3</i>	<i> </i>	<i>1240</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
<i>-07</i>	<i>SGI-21</i>	<i> </i>	<i>1445</i>	<i> </i>	<i> </i>	<i> </i>	<i> </i>		
Form-24 Rev. 1						QA Manager 2/22/10			
AUTHORIZATION TO PERFORM WORK		COMPANY		DATE/TIME		COMMENTS <i>• COLLECT TIME 14:15 per label: T Raymond</i> <i>* H₂S ASTM Method D5504</i> <i>Low Level</i>			
SAMPLED BY: <i>James Waters / James A. Waters</i>		COMPANY: <i>S+ME</i>		DATE/TIME: <i>9/30/24</i>					
RELINQUISHED BY: <i>James A. Waters</i>		DATE/TIME: <i>9/30/24 1730</i>		RECEIVED BY: <i>[Signature]</i>				DATE/TIME: <i>10/1/24</i>	
RELINQUISHED BY: <i>FedEx</i>		DATE/TIME: <i>10/1/24</i>		RECEIVED BY: <i>[Signature]</i>				DATE/TIME: <i>10/1/24</i>	
RELINQUISHED BY:		DATE/TIME:		RECEIVED BY:				DATE/TIME:	
METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____									

Client: S&ME
Attn: Jerry Paul
Project Name: Cliffdale Landfill
Project No.: 23050459
Date Received: 10/01/24
Matrix: Air
Reporting Units: ppmv


ASTM D5504

Lab No.:	R100101-01	R100101-02	R100101-03	R100101-04				
Client Sample I.D.:	SGI-26	SGI-25	SGI-24	SGI-23				
Date/Time Sampled:	9/30/24 12:20	9/30/24 12:40	9/30/24 13:15	9/30/24 13:35				
Date/Time Analyzed:	10/1/24 9:03	10/1/24 9:15	10/1/24 9:09	10/1/24 9:45				
QC Batch No.:	241001GC3A1	241001GC3A1	241001GC3A1	241001GC3A1				
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD				
Dilution Factor:	10	10	1.0	10				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	47	2.0	23	2.0	5.6	0.20	14	2.0

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date 10/17/24

The cover letter is an integral part of this analytical report



Client: S&ME
 Attn: Jerry Paul
 Project Name: Cliffdale Landfill
 Project No.: 23050459
 Date Received: 10/01/24
 Matrix: Air
 Reporting Units: ppmv

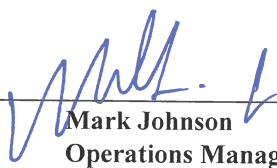
ASTM D5504

Lab No.:	R100101-05	R100101-06	R100101-07					
Client Sample I.D.:	SGI-22	Duplicate-3	SGI-21					
Date/Time Sampled:	9/30/24 14:15	9/30/24 12:40	9/30/24 14:45					
Date/Time Analyzed:	10/1/24 9:51	10/1/24 9:27	10/1/24 9:39					
QC Batch No.:	241001GC3A1	241001GC3A1	241001GC3A1					
Analyst Initials:	AS/KD	AS/KD	AS/KD					
Dilution Factor:	10	10	1.0					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv		
Hydrogen Sulfide	15	2.0	23	2.0	0.60	0.20		

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date 10/17/24

The cover letter is an integral part of this analytical report



QC Batch No.: 241001GC3A1

Matrix: Air

Reporting Units: ppmv

ASTM D5504

Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	10/1/24 8:29			10/1/24 11:36		10/1/24 11:52					
Analyst Initials:	AS/KD			AS/KD		AS/KD					
Dilution Factor:	1.0			1.0		1.0					
									Limits		
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.20	1.14	1.07	94	1.08	94	0.7	70	130	30

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

[Signature]
Mark Johnson
Operations Manager

Date _____

[Signature]
10/17/24

The cover letter is an integral part of this analytical report





October 22, 2024



S&ME
ATTN: Jerry Paul
3201 Spring Forest Rd.
Raleigh, NC 27616

LA Cert #04140
EPA Methods TO3, TO14A, TO15, 25C/3C,
ASTM D1946, RSK-175

TX Cert T104704450-14-6
EPA Methods TO14A, TO15

UT Cert CA0133332015-3
EPA Methods TO3, TO14A, TO15, RSK-175

ALASKA CS-LAP 24-002
EPA Methods TO14A, TO15

LABORATORY TEST RESULTS

Project Reference: Cliffdale Landfill
Project Number: 23050459
Lab Number: R100201-01/07

Enclosed are results for sample(s) received 10/02/24 by Air Technology Laboratories. Samples were received intact. Analyses were performed according to specifications on the chain of custody provided with the sample(s).

Report Narrative:

- Unless otherwise noted in the report, sample analyses were performed within method performance criteria and meet all requirements of the TNI Standards.
- The enclosed results relate only to the sample(s).

Preliminary results were e-mailed to Jerry Paul and Tom Raymond on 10/21/24.

ATL appreciates the opportunity to provide testing services to your company. If you have any questions regarding these results, please call me at (626) 964-4032.

Sincerely,

A handwritten signature in blue ink that reads "Mark Johnson".

Mark Johnson
Operations Manager
MJohnson@AirTechLabs.com

Note: The cover letter is an integral part of this analytical report.



18501 E. Gale Ave., Suite 130
City of Industry, CA 91748
Ph: 626-964-4032
Fx: 626-964-5832

CHAIN OF CUSTODY RECORD

TURNAROUND TIME	DELIVERABLES	PAGE: 1 OF 1
Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	EDD <input type="checkbox"/>	Condition upon receipt: Sealed Yes <input type="checkbox"/> No <input type="checkbox"/> Intact Yes <input type="checkbox"/> No <input type="checkbox"/> Chilled _____ deg C
Same Day <input type="checkbox"/> 72 hours <input type="checkbox"/>	EDF <input type="checkbox"/>	
24 hours <input checked="" type="checkbox"/> 96 hours <input type="checkbox"/>	Level 3 <input type="checkbox"/>	
Other: <u>NA 10/12/04</u>	Level 4 <input type="checkbox"/>	

Project No.: ~~SMME Inc~~ 23050459
Project Name: Cliffdale LF
Report To: Tom Raymond, Jerry Paul
Company: SMME Inc.
Street: 2724 Discovery Drive
City/State/Zip: Raleigh NC 27616
Phone & Fax: 919-872-2660
e-mail: traymond@smmeinc.com, jcpaul@smmeinc.com

BILLING	ANALYSIS REQUEST
P.O. No.: Same	* Hydrogen Sulfide H ₂ S (Low Level) ASTM Method D5504 (Level)
Bill to:	

LAB USE ONLY	SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	CONTAINER QTY/TYPE	MATRIX	PRESERVATION	
R100201-01	SGP-18	10-1-04	1434	Tedlar Bag	Gas	None	✓
↓ -02	SGP-17		1445				
↓ -03	SGP-20		1455				
↓ -04	SGP-27		1506				
↓ -05	SGP-28		1515				
↓ -06	SGP-29		1525				
↓ -07	Duplicate -04		1435				

Form-24 Rev. 1

AUTHORIZATION TO PERFORM WORK		COMPANY	DATE/TIME
SAMPLED BY: James Waters / Logan Hester		COMPANY: SMME	DATE/TIME: 10/1/04
RELINQUISHED BY: Chris G. ...	DATE/TIME: 10/1/04 1815	RECEIVED BY:	DATE/TIME:
RELINQUISHED BY: [Signature]	DATE/TIME: 10/2/04 0711	RECEIVED BY: [Signature]	DATE/TIME: 10/2/04
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:

QA Manager 2/22/10

COMMENTS

* H₂S ASTM Method D5504
Low Level

METHOD OF TRANSPORT (circle one): Walk-In FedEx UPS Courier ATLI Other _____

Client: S&ME
 Attn: Jerry Paul
 Project Name: Cliffdale Landfill
 Project No.: 23050459
 Date Received: 10/02/24
 Matrix: Air
 Reporting Units: ppmv

ASTM D5504

Lab No.:	R100201-01	R100201-02	R100201-03	R100201-04				
Client Sample I.D.:	SGI-18	SGP-19	SGP-20	SGP-27				
Date/Time Sampled:	10/1/24 14:35	10/1/24 14:45	10/1/24 14:55	10/1/24 15:05				
Date/Time Analyzed:	10/2/24 9:54	10/2/24 10:00	10/2/24 10:06	10/2/24 9:36				
QC Batch No.:	241002GC3A1	241002GC3A1	241002GC3A1	241002GC3A1				
Analyst Initials:	AS/KD	AS/KD	AS/KD	AS/KD				
Dilution Factor:	10	10	10	1.0				
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv
Hydrogen Sulfide	20	2.0	24	2.0	25	2.0	12	0.20

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____

Mark Johnson
 Mark Johnson
 Operations Manager

Date _____

10/2/24

The cover letter is an integral part of this analytical report



Client: S&ME
Attn: Jerry Paul
Project Name: Cliffdale Landfill
Project No.: 23050459
Date Received: 10/02/24
Matrix: Air
Reporting Units: ppmv


ASTM D5504

Lab No.:	R100201-05	R100201-06	R100201-07					
Client Sample I.D.:	SGP-28	SGP-29	Duplicate-04					
Date/Time Sampled:	10/1/24 15:15	10/1/24 15:25	10/1/24 14:35					
Date/Time Analyzed:	10/2/24 10:12	10/2/24 9:48	10/2/24 9:18					
QC Batch No.:	241002GC3A1	241002GC3A1	241002GC3A1					
Analyst Initials:	AS/KD	AS/KD	AS/KD					
Dilution Factor:	10	1.0	1.0					
ANALYTE	Result ppmv	RL ppmv	Result ppmv	RL ppmv	Result ppmv	RL ppmv		
Hydrogen Sulfide	14	2.0	12	0.20	11	0.20		

ND = Not Detected (below RL)

RL = Reporting Limit

Reviewed/Approved By: _____


Mark Johnson
Operations Manager

Date 10/21/24

The cover letter is an integral part of this analytical report




QC Batch No.: 241002GC3A1
 Matrix: Air
 Reporting Units: ppmv

ASTM D5504

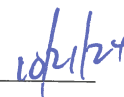
Lab No.:	METHOD BLANK			LCS		LCSD					
Date/Time Analyzed:	10/2/24 8:55			10/2/24 10:18		10/2/24 10:33					
Analyst Initials:	AS/KD			AS/KD		AS/KD					
Dilution Factor:	1.0			1.0		1.0					
									Limits		
ANALYTE	Result ppmv	RL ppmv	SPIKE AMT. ppmv	Result ppmv	% Rec.	Result ppmv	% Rec.	% RPD	Low %Rec	High %Rec	Max. RPD
Hydrogen Sulfide	ND	0.20	1.14	1.08	94	1.06	93	1.3	70	130	30

ND = Not Detected (below RL)
 RL = Reporting Limit

Reviewed/Approved By: _____


 Mark Johnson
 Operations Manager

Date _____



The cover letter is an integral part of this analytical report



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ANALYTICAL REPORT

PREPARED FOR

Attn: Thomas Raymond
S&ME Inc
3201 Spring Forest Road
Raleigh, North Carolina 27616
Generated 10/18/2024 8:27:24 AM

JOB DESCRIPTION

Cliffdale Landfill

JOB NUMBER

752-24759-1

Eurofins Raleigh

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization



Generated
10/18/2024 8:27:24 AM

Authorized for release by
Chad Bechtold, Project Manager
Chad.Bechtold@et.eurofinsus.com
(813)690-3563



Table of Contents

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Definitions/Glossary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points

Definitions/Glossary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Case Narrative

Client: S&ME Inc
Project: Cliffdale Landfill

Job ID: 752-24759-1

Job ID: 752-24759-1

Eurofins Raleigh

Job Narrative 752-24759-1

Receipt

The samples were received on 10/2/2024 8:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 4.2°C and 4.7°C.

GC/MS VOA

Method 8260D: The laboratory control sample (LCS) for analytical batch 400-687530 recovered outside control limits for the following analytes: Acetone and 2-Butanone (MEK). These analytes were biased high in the LCS and were not detected or not reported in the associated samples; therefore, the data have been reported.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-4 (752-24759-3). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

Method 8270E: The laboratory control sample duplicate (LCSD) for preparation batch 400-687183 and analytical batch 400-687425 recovered outside control limits for the following analyte: 2,4-Dimethylphenol. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

Method 6020B - Total Recoverable: The following sample was diluted due to the nature of the sample matrix: MW-6 (752-24759-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.990	J	1.00	0.500	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	4.66		1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	2.69		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	2.56		1.00	0.420	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	62.0		1.00	0.710	ug/L	1		8260D	Total/NA
1,4-Dioxane	10.4		0.292	0.292	ug/L	1		8270E SIM ID	Total/NA
Caprolactam	7.63	J	9.51	2.28	ug/L	1		8270E	Total/NA
Sulfate	2.06		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	44.4		5.00	1.32	ug/L	1		6020B	Total Recoverable
Barium	15.9		10.0	0.410	ug/L	1		6020B	Total Recoverable
Chromium	4.50	J	5.00	3.69	ug/L	1		6020B	Total Recoverable
Cobalt	0.431	J	5.00	0.411	ug/L	1		6020B	Total Recoverable
Copper	1.07	J	2.00	0.642	ug/L	1		6020B	Total Recoverable
Lead	1.56		1.00	0.864	ug/L	1		6020B	Total Recoverable
Manganese	19.4		5.00	1.29	ug/L	1		6020B	Total Recoverable
Nickel	1.67	J	5.00	0.422	ug/L	1		6020B	Total Recoverable
Vanadium	5.26		5.00	1.22	ug/L	1		6020B	Total Recoverable
Zinc	10.2		10.0	8.91	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	87.8		2.57	1.03	mg/L	51.43		350.1	Total/NA
Nitrate Nitrite as N	0.105		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.105		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	1.60		1.00	0.560	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	4.47		1.00	0.640	ug/L	1		8260D	Total/NA
Acetone	11.4	J *+	25.0	10.0	ug/L	1		8260D	Total/NA
Benzene	12.0		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	9.56		1.00	0.420	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.817	J	1.00	0.200	ug/L	1		8260D	Total/NA
Ethylbenzene	6.51		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	1.61		1.00	0.530	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.247	J	1.00	0.220	ug/L	1		8260D	Total/NA
4-Methyl-2-pentanone (MIBK)	2.16	J	25.0	1.80	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	26.7		5.00	3.00	ug/L	1		8260D	Total/NA
N-Propylbenzene	1.44		1.00	0.690	ug/L	1		8260D	Total/NA
Naphthalene	55.7		5.00	3.00	ug/L	1		8260D	Total/NA
o-Xylene	3.49	J	5.00	3.00	ug/L	1		8260D	Total/NA
Toluene	5.99		1.00	0.900	ug/L	1		8260D	Total/NA
Xylenes, Total	30.2		10.0	6.00	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	4.62		1.00	0.710	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	3.51		1.00	0.820	ug/L	1		8260D	Total/NA
n-Heptane	0.695	J	1.00	0.210	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-3 (Continued)

Lab Sample ID: 752-24759-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	33.7		0.293	0.293	ug/L	1		8270E SIM ID	Total/NA
3 & 4 Methylphenol	14.0	J	21.1	4.86	ug/L	1		8270E	Total/NA
Di-n-butyl phthalate	7.72	J	10.6	4.86	ug/L	1		8270E	Total/NA
Diethyl phthalate	28.1		10.6	4.65	ug/L	1		8270E	Total/NA
Naphthalene	39.5		10.6	4.23	ug/L	1		8270E	Total/NA
Sulfate	3.18		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	2.25	J	5.00	1.32	ug/L	1		6020B	Total Recoverable
Barium	100		10.0	0.410	ug/L	1		6020B	Total Recoverable
Cadmium	0.265	J	0.700	0.237	ug/L	1		6020B	Total Recoverable
Chromium	7.36		5.00	3.69	ug/L	1		6020B	Total Recoverable
Cobalt	6.14		5.00	0.411	ug/L	1		6020B	Total Recoverable
Copper	3.90		2.00	0.642	ug/L	1		6020B	Total Recoverable
Lead	12.3		1.00	0.864	ug/L	1		6020B	Total Recoverable
Manganese	43.2		5.00	1.29	ug/L	1		6020B	Total Recoverable
Nickel	18.6		5.00	0.422	ug/L	1		6020B	Total Recoverable
Vanadium	2.81	J	5.00	1.22	ug/L	1		6020B	Total Recoverable
Zinc	44.4		10.0	8.91	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	280		25.0	10.0	mg/L	500		350.1	Total/NA
Nitrate Nitrite as N	0.133		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.133		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-4

Lab Sample ID: 752-24759-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichlorobenzene	0.522	J	1.00	0.500	ug/L	1		8260D	Total/NA
1,3,5-Trimethylbenzene	5.66		1.00	0.560	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	16.7		1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	3.93		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	2.15		1.00	0.420	ug/L	1		8260D	Total/NA
Ethylbenzene	31.3		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	1.88		1.00	0.530	ug/L	1		8260D	Total/NA
4-Methyl-2-pentanone (MIBK)	179		25.0	1.80	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	55.7		5.00	3.00	ug/L	1		8260D	Total/NA
n-Butylbenzene	1.72		1.00	0.760	ug/L	1		8260D	Total/NA
N-Propylbenzene	1.94		1.00	0.690	ug/L	1		8260D	Total/NA
Naphthalene	5.76		5.00	3.00	ug/L	1		8260D	Total/NA
o-Xylene	22.1		5.00	3.00	ug/L	1		8260D	Total/NA
Toluene	28.2		1.00	0.900	ug/L	1		8260D	Total/NA
Trichloroethene	0.611	J	1.00	0.150	ug/L	1		8260D	Total/NA
Xylenes, Total	77.8		10.0	6.00	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	10.7		1.00	0.710	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	23.4		1.00	0.820	ug/L	1		8260D	Total/NA
Ethyl acetate	371		10.0	6.14	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-4 (Continued)

Lab Sample ID: 752-24759-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone - DL	325		50.0	20.0	ug/L	2		8260D	Total/NA
2-Butanone (MEK) - DL	624		50.0	5.20	ug/L	2		8260D	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 752-24759-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	0.784	J	1.00	0.560	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	11.7		1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	5.59		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	10.1		1.00	0.420	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.227	J	1.00	0.220	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	7.64		5.00	3.00	ug/L	1		8260D	Total/NA
Xylenes, Total	7.98	J	10.0	6.00	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	1.83		1.00	0.820	ug/L	1		8260D	Total/NA
Sulfate	1.89		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	4.88	J	5.00	1.32	ug/L	1		6020B	Total Recoverable
Barium	145		10.0	0.410	ug/L	1		6020B	Total Recoverable
Manganese	219		5.00	1.29	ug/L	1		6020B	Total Recoverable
Mercury	0.338		0.200	0.166	ug/L	1		7470A	Total/NA
Ammonia (as N)	2.88	F1	0.500	0.200	mg/L	10		350.1	Total/NA
Nitrate Nitrite as N	0.0746	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0746	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-6

Lab Sample ID: 752-24759-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	0.826	J	1.00	0.560	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	4.08		1.00	0.640	ug/L	1		8260D	Total/NA
Acetone	11.5	J *+	25.0	10.0	ug/L	1		8260D	Total/NA
Benzene	5.28		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	12.3		1.00	0.420	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	1.64		1.00	0.200	ug/L	1		8260D	Total/NA
Ethylbenzene	25.1		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	0.767	J	1.00	0.530	ug/L	1		8260D	Total/NA
2-Butanone (MEK)	4.31	J *+	25.0	2.60	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	33.4		5.00	3.00	ug/L	1		8260D	Total/NA
o-Xylene	13.8		5.00	3.00	ug/L	1		8260D	Total/NA
Toluene	2.21		1.00	0.900	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.515	J	1.00	0.500	ug/L	1		8260D	Total/NA
Xylenes, Total	47.1		10.0	6.00	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	0.952	J	1.00	0.710	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	2.65		1.00	0.820	ug/L	1		8260D	Total/NA
1,4-Dioxane	1.27		0.310	0.310	ug/L	1		8270E SIM ID	Total/NA
N-Nitrosodiphenylamine	6.09	J	10.8	4.01	ug/L	1		8270E	Total/NA
Caprolactam	3.24	J	10.8	2.60	ug/L	1		8270E	Total/NA
Sulfate	1.93		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	8.53	J	25.0	6.60	ug/L	5		6020B	Total Recoverable
Barium	352	^3+	50.0	2.05	ug/L	5		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-6 (Continued)

Lab Sample ID: 752-24759-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Beryllium	3.43		1.00	0.147	ug/L	1		6020B	Total
Cadmium	1.63	J	3.50	1.19	ug/L	5		6020B	Total Recoverable
Chromium	168	^3+	25.0	18.5	ug/L	5		6020B	Total Recoverable
Cobalt	7.20	J	10.0	0.822	ug/L	2		6020B	Total Recoverable
Copper	71.7	^3+	10.0	3.21	ug/L	5		6020B	Total Recoverable
Lead	75.3		2.00	1.73	ug/L	2		6020B	Total Recoverable
Manganese	396		10.0	2.58	ug/L	2		6020B	Total Recoverable
Nickel	83.7	^3+	25.0	2.11	ug/L	5		6020B	Total Recoverable
Selenium	14.6		10.0	4.58	ug/L	2		6020B	Total Recoverable
Silver	1.01	J ^3+	5.00	0.835	ug/L	5		6020B	Total Recoverable
Vanadium	261		10.0	2.44	ug/L	2		6020B	Total Recoverable
Zinc	1650		20.0	17.8	ug/L	2		6020B	Total Recoverable
Mercury	1.03		0.200	0.166	ug/L			7470A	Total/NA
Ammonia (as N)	25.4		2.57	1.03	mg/L	51.43		350.1	Total/NA
Nitrate Nitrite as N	0.0915	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0915	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	2.06		1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	3.57		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	8.55		1.00	0.420	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.247	J	1.00	0.200	ug/L	1		8260D	Total/NA
Ethylbenzene	0.697	J	1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	2.03		1.00	0.530	ug/L	1		8260D	Total/NA
N-Propylbenzene	1.85		1.00	0.690	ug/L	1		8260D	Total/NA
Naphthalene	20.7		5.00	3.00	ug/L	1		8260D	Total/NA
Naphthalene	9.75	J	10.5	4.20	ug/L	1		8270E	Total/NA
Sulfate	0.800	J	1.00	0.390	mg/L	1		9056A	Total/NA
Barium	191		10.0	0.410	ug/L	1		6020B	Total Recoverable
Cobalt	1.34	J	5.00	0.411	ug/L	1		6020B	Total Recoverable
Copper	8.03		2.00	0.642	ug/L	1		6020B	Total Recoverable
Lead	4.43		1.00	0.864	ug/L	1		6020B	Total Recoverable
Manganese	1300		5.00	1.29	ug/L	1		6020B	Total Recoverable
Nickel	5.32		5.00	0.422	ug/L	1		6020B	Total Recoverable
Zinc	58.6		10.0	8.91	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7 (Continued)

Lab Sample ID: 752-24759-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	30.2		2.57	1.03	mg/L	51.43		350.1	Total/NA
Nitrate Nitrite as N	0.144		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.144		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	1.57		1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	1.91		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	3.81		1.00	0.420	ug/L	1		8260D	Total/NA
Isopropylbenzene	0.677	J	1.00	0.530	ug/L	1		8260D	Total/NA
Naphthalene	5.10		5.00	3.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	13.7		0.359	0.359	ug/L	1		8270E SIM ID	Total/NA
Sulfate	2.00		1.00	0.390	mg/L	1		9056A	Total/NA
Barium	153		10.0	0.410	ug/L	1		6020B	Total Recoverable
Cobalt	2.15	J	5.00	0.411	ug/L	1		6020B	Total Recoverable
Copper	1.38	J	2.00	0.642	ug/L	1		6020B	Total Recoverable
Manganese	540		50.0	12.9	ug/L	10		6020B	Total Recoverable
Nickel	5.17		5.00	0.422	ug/L	1		6020B	Total Recoverable
Vanadium	1.22	J	5.00	1.22	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	90.9		2.57	1.03	mg/L	51.43		350.1	Total/NA
Nitrate Nitrite as N	0.563		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.563		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	0.683	J	1.00	0.640	ug/L	1		8260D	Total/NA
Benzene	1.75		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	4.83		1.00	0.420	ug/L	1		8260D	Total/NA
Naphthalene	4.86	J	5.00	3.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	13.9		0.337	0.337	ug/L	1		8270E SIM ID	Total/NA
Naphthalene	4.62	J	9.81	3.92	ug/L	1		8270E	Total/NA
Caprolactam	2.84	J	9.81	2.35	ug/L	1		8270E	Total/NA
Sulfate	3.45		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	6.52		5.00	1.32	ug/L	1		6020B	Total Recoverable
Barium	150		10.0	0.410	ug/L	1		6020B	Total Recoverable
Cobalt	0.796	J	5.00	0.411	ug/L	1		6020B	Total Recoverable
Lead	1.26		1.00	0.864	ug/L	1		6020B	Total Recoverable
Manganese	131		5.00	1.29	ug/L	1		6020B	Total Recoverable
Nickel	2.31	J	5.00	0.422	ug/L	1		6020B	Total Recoverable
Vanadium	6.71		5.00	1.22	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9 (Continued)

Lab Sample ID: 752-24759-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	51.5		2.57	1.03	mg/L	51.43		350.1	Total/NA
Nitrate Nitrite as N	0.123		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.123		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	1.59		1.00	0.560	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	4.65		1.00	0.640	ug/L	1		8260D	Total/NA
Acetone	11.6	J *+	25.0	10.0	ug/L	1		8260D	Total/NA
Benzene	13.2		1.00	0.240	ug/L	1		8260D	Total/NA
Chlorobenzene	9.60		1.00	0.420	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.950	J	1.00	0.200	ug/L	1		8260D	Total/NA
Ethylbenzene	6.43		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	1.64		1.00	0.530	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.281	J	1.00	0.220	ug/L	1		8260D	Total/NA
4-Methyl-2-pentanone (MIBK)	2.10	J	25.0	1.80	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	27.1		5.00	3.00	ug/L	1		8260D	Total/NA
N-Propylbenzene	1.38		1.00	0.690	ug/L	1		8260D	Total/NA
Naphthalene	59.8		5.00	3.00	ug/L	1		8260D	Total/NA
o-Xylene	3.27	J	5.00	3.00	ug/L	1		8260D	Total/NA
Toluene	5.77		1.00	0.900	ug/L	1		8260D	Total/NA
Xylenes, Total	30.3		10.0	6.00	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	4.13		1.00	0.710	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	3.26		1.00	0.820	ug/L	1		8260D	Total/NA
n-Heptane	0.860	J	1.00	0.210	ug/L	1		8260D	Total/NA
1,4-Dioxane	34.2		0.286	0.286	ug/L	1		8270E SIM ID	Total/NA
2-Methylnaphthalene	4.68	J	9.99	4.60	ug/L	1		8270E	Total/NA
3 & 4 Methylphenol	15.3	J	20.0	4.60	ug/L	1		8270E	Total/NA
Di-n-butyl phthalate	8.54	J	9.99	4.60	ug/L	1		8270E	Total/NA
Diethyl phthalate	30.5		9.99	4.40	ug/L	1		8270E	Total/NA
Naphthalene	45.3		9.99	4.00	ug/L	1		8270E	Total/NA
Sulfate	2.40		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	2.18	J	5.00	1.32	ug/L	1		6020B	Total Recoverable
Barium	103		10.0	0.410	ug/L	1		6020B	Total Recoverable
Cadmium	0.239	J	0.700	0.237	ug/L	1		6020B	Total Recoverable
Chromium	7.28		5.00	3.69	ug/L	1		6020B	Total Recoverable
Cobalt	5.83		5.00	0.411	ug/L	1		6020B	Total Recoverable
Copper	3.96		2.00	0.642	ug/L	1		6020B	Total Recoverable
Lead	11.9		1.00	0.864	ug/L	1		6020B	Total Recoverable
Manganese	41.1		5.00	1.29	ug/L	1		6020B	Total Recoverable
Nickel	18.4		5.00	0.422	ug/L	1		6020B	Total Recoverable
Vanadium	2.73	J	5.00	1.22	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Raleigh

Detection Summary

Client: S&ME Inc
 Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: DUP-01 (Continued)

Lab Sample ID: 752-24759-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	45.4		10.0	8.91	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	263		25.0	10.0	mg/L	500		350.1	Total/NA
Nitrate Nitrite as N	0.0789	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0789	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 752-24759-10

No Detections.

This Detection Summary does not include radiochemical test results.



Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Date Collected: 10/01/24 10:55

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 11:53	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 11:53	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 11:53	1
1,1-Dichloroethane	0.990	J	1.00	0.500	ug/L			10/11/24 11:53	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 11:53	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 11:53	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 11:53	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 11:53	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 11:53	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 11:53	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 11:53	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,4-Dichlorobenzene	4.66		1.00	0.640	ug/L			10/11/24 11:53	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 11:53	1
2-Hexanone	ND	F1	25.0	4.26	ug/L			10/11/24 11:53	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 11:53	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 11:53	1
Benzene	2.69		1.00	0.240	ug/L			10/11/24 11:53	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 11:53	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 11:53	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 11:53	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 11:53	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 11:53	1
Chlorobenzene	2.56		1.00	0.420	ug/L			10/11/24 11:53	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 11:53	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 11:53	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 11:53	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 11:53	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 11:53	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 11:53	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 11:53	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 11:53	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 11:53	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 11:53	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 11:53	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 11:53	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 11:53	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 11:53	1
Isopropylbenzene	ND		1.00	0.530	ug/L			10/11/24 11:53	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 11:53	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 11:53	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 11:53	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 11:53	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Date Collected: 10/01/24 10:55

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 11:53	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 11:53	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 11:53	1
Naphthalene	ND		5.00	3.00	ug/L			10/11/24 11:53	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 11:53	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 11:53	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 11:53	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 11:53	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 11:53	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 11:53	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 11:53	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 11:53	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 11:53	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 11:53	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 11:53	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 11:53	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 11:53	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 11:53	1
4-Isopropyltoluene	62.0		1.00	0.710	ug/L			10/11/24 11:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 11:53	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 11:53	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 11:53	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 11:53	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 11:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	104		72 - 130		10/11/24 11:53	1
Dibromofluoromethane	112		75 - 126		10/11/24 11:53	1
Toluene-d8 (Surr)	95		64 - 132		10/11/24 11:53	1
1,2-Dichloroethane-d4 (Surr)	87		67 - 134		10/11/24 11:53	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	10.4		0.292	0.292	ug/L		10/08/24 15:02	10/09/24 19:39	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	28		10 - 140	10/08/24 15:02	10/09/24 19:39	1			

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.51	3.42	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4,5-Trichlorophenol	ND		9.51	3.81	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4,6-Trichlorophenol	ND		9.51	3.33	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4-Dichlorophenol	ND		9.51	4.09	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4-Dimethylphenol	ND	*+	9.51	4.95	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4-Dinitrophenol	ND		28.5	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
2,4-Dinitrotoluene	ND		9.51	4.85	ug/L		10/08/24 15:05	10/10/24 19:50	1
2-Chlorophenol	ND		9.51	3.90	ug/L		10/08/24 15:05	10/10/24 19:50	1
2-Chloronaphthalene	ND		9.51	3.61	ug/L		10/08/24 15:05	10/10/24 19:50	1
2-Methylnaphthalene	ND		9.51	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
2-Methylphenol	ND		9.51	3.04	ug/L		10/08/24 15:05	10/10/24 19:50	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Date Collected: 10/01/24 10:55

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.51	4.76	ug/L		10/08/24 15:05	10/10/24 19:50	1
2-Nitrophenol	ND		9.51	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
3 & 4 Methylphenol	ND		19.0	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
3,3'-Dichlorobenzidine	ND		10.5	10.5	ug/L		10/08/24 15:05	10/10/24 19:50	1
3-Nitroaniline	ND		9.51	4.47	ug/L		10/08/24 15:05	10/10/24 19:50	1
4,6-Dinitro-2-methylphenol	ND		9.51	9.51	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Bromophenyl phenyl ether	ND		9.51	8.18	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Chloro-3-methylphenol	ND		9.51	5.04	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Chloroaniline	ND		9.51	4.47	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Chlorophenyl phenyl ether	ND		9.51	3.52	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Nitroaniline	ND		9.51	3.90	ug/L		10/08/24 15:05	10/10/24 19:50	1
Acenaphthene	ND		9.51	4.19	ug/L		10/08/24 15:05	10/10/24 19:50	1
Acenaphthylene	ND		9.51	3.90	ug/L		10/08/24 15:05	10/10/24 19:50	1
Acetophenone	ND		9.51	4.85	ug/L		10/08/24 15:05	10/10/24 19:50	1
Anthracene	ND		9.51	3.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzo[a]anthracene	ND		9.51	6.28	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzo[a]pyrene	ND		9.51	2.76	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzo[b]fluoranthene	ND		9.51	4.95	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzo[g,h,i]perylene	ND		9.51	2.95	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzo[k]fluoranthene	ND		9.51	3.14	ug/L		10/08/24 15:05	10/10/24 19:50	1
Bis(2-chloroethoxy)methane	ND		9.51	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
Bis(2-chloroethyl)ether	ND		9.51	3.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
Bis(2-ethylhexyl) phthalate	ND		9.51	8.47	ug/L		10/08/24 15:05	10/10/24 19:50	1
Chrysene	ND		9.51	6.09	ug/L		10/08/24 15:05	10/10/24 19:50	1
Dibenz(a,h)anthracene	ND		9.51	2.57	ug/L		10/08/24 15:05	10/10/24 19:50	1
Dibenzofuran	ND		9.51	3.81	ug/L		10/08/24 15:05	10/10/24 19:50	1
Di-n-butyl phthalate	ND		9.51	4.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
Diethyl phthalate	ND		9.51	4.19	ug/L		10/08/24 15:05	10/10/24 19:50	1
Dimethyl phthalate	ND		9.51	4.00	ug/L		10/08/24 15:05	10/10/24 19:50	1
Di-n-octyl phthalate	ND		9.51	5.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
Fluoranthene	ND		9.51	3.90	ug/L		10/08/24 15:05	10/10/24 19:50	1
Fluorene	ND		9.51	4.47	ug/L		10/08/24 15:05	10/10/24 19:50	1
Hexachlorobenzene	ND		9.51	9.23	ug/L		10/08/24 15:05	10/10/24 19:50	1
Hexachlorobutadiene	ND		9.51	3.52	ug/L		10/08/24 15:05	10/10/24 19:50	1
Hexachlorocyclopentadiene	ND		19.0	4.28	ug/L		10/08/24 15:05	10/10/24 19:50	1
Hexachloroethane	ND		9.51	4.95	ug/L		10/08/24 15:05	10/10/24 19:50	1
Indeno[1,2,3-cd]pyrene	ND		9.51	2.76	ug/L		10/08/24 15:05	10/10/24 19:50	1
Isophorone	ND		9.51	4.95	ug/L		10/08/24 15:05	10/10/24 19:50	1
Naphthalene	ND		9.51	3.81	ug/L		10/08/24 15:05	10/10/24 19:50	1
Nitrobenzene	ND		9.51	4.47	ug/L		10/08/24 15:05	10/10/24 19:50	1
N-Nitrosodiphenylamine	ND		9.51	3.52	ug/L		10/08/24 15:05	10/10/24 19:50	1
N-Nitrosodi-n-propylamine	ND		9.51	2.38	ug/L		10/08/24 15:05	10/10/24 19:50	1
Pentachlorophenol	ND		19.0	11.3	ug/L		10/08/24 15:05	10/10/24 19:50	1
Phenanthrene	ND		9.51	2.66	ug/L		10/08/24 15:05	10/10/24 19:50	1
Phenol	ND		9.51	4.00	ug/L		10/08/24 15:05	10/10/24 19:50	1
Pyrene	ND		9.51	3.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
Butyl benzyl phthalate	ND		9.51	5.52	ug/L		10/08/24 15:05	10/10/24 19:50	1
bis (2-chloroisopropyl) ether	ND		9.51	1.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
Carbazole	ND		9.51	4.76	ug/L		10/08/24 15:05	10/10/24 19:50	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Date Collected: 10/01/24 10:55

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.51	3.71	ug/L		10/08/24 15:05	10/10/24 19:50	1
4-Nitrophenol	ND		9.51	3.14	ug/L		10/08/24 15:05	10/10/24 19:50	1
Atrazine	ND		9.51	4.76	ug/L		10/08/24 15:05	10/10/24 19:50	1
Benzaldehyde	ND		9.51	2.19	ug/L		10/08/24 15:05	10/10/24 19:50	1
Caprolactam	7.63	J	9.51	2.28	ug/L		10/08/24 15:05	10/10/24 19:50	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		10 - 150				10/08/24 15:05	10/10/24 19:50	1
2-Fluorobiphenyl (Surr)	70		21 - 114				10/08/24 15:05	10/10/24 19:50	1
2-Fluorophenol (Surr)	53		10 - 105				10/08/24 15:05	10/10/24 19:50	1
Terphenyl-d14 (Surr)	90		13 - 150				10/08/24 15:05	10/10/24 19:50	1
Phenol-d5 (Surr)	39		10 - 129				10/08/24 15:05	10/10/24 19:50	1
Nitrobenzene-d5 (Surr)	66		16 - 127				10/08/24 15:05	10/10/24 19:50	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.06		1.00	0.390	mg/L			10/08/24 17:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 22:21	1
Arsenic	44.4		5.00	1.32	ug/L		10/07/24 12:39	10/09/24 22:21	1
Barium	15.9		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 22:21	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 22:21	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 22:21	1
Chromium	4.50	J	5.00	3.69	ug/L		10/07/24 12:39	10/09/24 22:21	1
Cobalt	0.431	J	5.00	0.411	ug/L		10/07/24 12:39	10/09/24 22:21	1
Copper	1.07	J	2.00	0.642	ug/L		10/07/24 12:39	10/09/24 22:21	1
Lead	1.56		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 22:21	1
Manganese	19.4		5.00	1.29	ug/L		10/07/24 12:39	10/09/24 22:21	1
Nickel	1.67	J	5.00	0.422	ug/L		10/07/24 12:39	10/09/24 22:21	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 22:21	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 22:21	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 22:21	1
Vanadium	5.26		5.00	1.22	ug/L		10/07/24 12:39	10/09/24 22:21	1
Zinc	10.2		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 22:21	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	87.8		2.57	1.03	mg/L			10/03/24 13:22	51.43
Nitrate Nitrite as N (EPA 353.2)	0.105		0.100	0.0410	mg/L			10/07/24 13:33	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:36	1
Nitrate as N (SM Nitrate by calc)	0.105		0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Date Collected: 10/01/24 10:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 12:15	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 12:15	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 12:15	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 12:15	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 12:15	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 12:15	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 12:15	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 12:15	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,3,5-Trimethylbenzene	1.60		1.00	0.560	ug/L			10/11/24 12:15	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 12:15	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,4-Dichlorobenzene	4.47		1.00	0.640	ug/L			10/11/24 12:15	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 12:15	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 12:15	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 12:15	1
Acetone	11.4	J**	25.0	10.0	ug/L			10/11/24 12:15	1
Benzene	12.0		1.00	0.240	ug/L			10/11/24 12:15	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 12:15	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 12:15	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 12:15	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 12:15	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 12:15	1
Chlorobenzene	9.56		1.00	0.420	ug/L			10/11/24 12:15	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 12:15	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 12:15	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 12:15	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 12:15	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 12:15	1
cis-1,2-Dichloroethene	0.817	J	1.00	0.200	ug/L			10/11/24 12:15	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 12:15	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 12:15	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
Ethylbenzene	6.51		1.00	0.500	ug/L			10/11/24 12:15	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 12:15	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 12:15	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 12:15	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 12:15	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 12:15	1
Isopropylbenzene	1.61		1.00	0.530	ug/L			10/11/24 12:15	1
Methyl tert-butyl ether	0.247	J	1.00	0.220	ug/L			10/11/24 12:15	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 12:15	1
2-Butanone (MEK)	ND	*	25.0	2.60	ug/L			10/11/24 12:15	1
4-Methyl-2-pentanone (MIBK)	2.16	J	25.0	1.80	ug/L			10/11/24 12:15	1

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Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Date Collected: 10/01/24 10:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	26.7		5.00	3.00	ug/L			10/11/24 12:15	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 12:15	1
N-Propylbenzene	1.44		1.00	0.690	ug/L			10/11/24 12:15	1
Naphthalene	55.7		5.00	3.00	ug/L			10/11/24 12:15	1
o-Xylene	3.49 J		5.00	3.00	ug/L			10/11/24 12:15	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 12:15	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 12:15	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 12:15	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 12:15	1
Toluene	5.99		1.00	0.900	ug/L			10/11/24 12:15	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 12:15	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 12:15	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 12:15	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 12:15	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 12:15	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 12:15	1
Xylenes, Total	30.2		10.0	6.00	ug/L			10/11/24 12:15	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 12:15	1
4-Isopropyltoluene	4.62		1.00	0.710	ug/L			10/11/24 12:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 12:15	1
1,2,4-Trimethylbenzene	3.51		1.00	0.820	ug/L			10/11/24 12:15	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 12:15	1
n-Heptane	0.695 J		1.00	0.210	ug/L			10/11/24 12:15	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 12:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		72 - 130		10/11/24 12:15	1
Dibromofluoromethane	112		75 - 126		10/11/24 12:15	1
Toluene-d8 (Surr)	93		64 - 132		10/11/24 12:15	1
1,2-Dichloroethane-d4 (Surr)	93		67 - 134		10/11/24 12:15	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	33.7		0.293	0.293	ug/L		10/08/24 15:02	10/09/24 20:00	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	26		10 - 140				10/08/24 15:02	10/09/24 20:00	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10.6	3.80	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4,5-Trichlorophenol	ND		10.6	4.23	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4,6-Trichlorophenol	ND		10.6	3.70	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4-Dichlorophenol	ND		10.6	4.54	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4-Dimethylphenol	ND	*+	10.6	5.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4-Dinitrophenol	ND		31.7	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
2,4-Dinitrotoluene	ND		10.6	5.39	ug/L		10/08/24 15:05	10/10/24 20:14	1
2-Chlorophenol	ND		10.6	4.33	ug/L		10/08/24 15:05	10/10/24 20:14	1
2-Chloronaphthalene	ND		10.6	4.02	ug/L		10/08/24 15:05	10/10/24 20:14	1
2-Methylnaphthalene	ND		10.6	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
2-Methylphenol	ND		10.6	3.38	ug/L		10/08/24 15:05	10/10/24 20:14	1

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Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Date Collected: 10/01/24 10:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		10.6	5.28	ug/L		10/08/24 15:05	10/10/24 20:14	1
2-Nitrophenol	ND		10.6	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
3 & 4 Methylphenol	14.0	J	21.1	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
3,3'-Dichlorobenzidine	ND		11.6	11.6	ug/L		10/08/24 15:05	10/10/24 20:14	1
3-Nitroaniline	ND		10.6	4.97	ug/L		10/08/24 15:05	10/10/24 20:14	1
4,6-Dinitro-2-methylphenol	ND		10.6	10.6	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Bromophenyl phenyl ether	ND		10.6	9.09	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Chloro-3-methylphenol	ND		10.6	5.60	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Chloroaniline	ND		10.6	4.97	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Chlorophenyl phenyl ether	ND		10.6	3.91	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Nitroaniline	ND		10.6	4.33	ug/L		10/08/24 15:05	10/10/24 20:14	1
Acenaphthene	ND		10.6	4.65	ug/L		10/08/24 15:05	10/10/24 20:14	1
Acenaphthylene	ND		10.6	4.33	ug/L		10/08/24 15:05	10/10/24 20:14	1
Acetophenone	ND		10.6	5.39	ug/L		10/08/24 15:05	10/10/24 20:14	1
Anthracene	ND		10.6	4.12	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzo[a]anthracene	ND		10.6	6.97	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzo[a]pyrene	ND		10.6	3.06	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzo[b]fluoranthene	ND		10.6	5.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzo[g,h,i]perylene	ND		10.6	3.28	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzo[k]fluoranthene	ND		10.6	3.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
Bis(2-chloroethoxy)methane	ND		10.6	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
Bis(2-chloroethyl)ether	ND		10.6	4.12	ug/L		10/08/24 15:05	10/10/24 20:14	1
Bis(2-ethylhexyl) phthalate	ND		10.6	9.40	ug/L		10/08/24 15:05	10/10/24 20:14	1
Chrysene	ND		10.6	6.76	ug/L		10/08/24 15:05	10/10/24 20:14	1
Dibenz(a,h)anthracene	ND		10.6	2.85	ug/L		10/08/24 15:05	10/10/24 20:14	1
Dibenzofuran	ND		10.6	4.23	ug/L		10/08/24 15:05	10/10/24 20:14	1
Di-n-butyl phthalate	7.72	J	10.6	4.86	ug/L		10/08/24 15:05	10/10/24 20:14	1
Diethyl phthalate	28.1		10.6	4.65	ug/L		10/08/24 15:05	10/10/24 20:14	1
Dimethyl phthalate	ND		10.6	4.44	ug/L		10/08/24 15:05	10/10/24 20:14	1
Di-n-octyl phthalate	ND		10.6	6.34	ug/L		10/08/24 15:05	10/10/24 20:14	1
Fluoranthene	ND		10.6	4.33	ug/L		10/08/24 15:05	10/10/24 20:14	1
Fluorene	ND		10.6	4.97	ug/L		10/08/24 15:05	10/10/24 20:14	1
Hexachlorobenzene	ND		10.6	10.2	ug/L		10/08/24 15:05	10/10/24 20:14	1
Hexachlorobutadiene	ND		10.6	3.91	ug/L		10/08/24 15:05	10/10/24 20:14	1
Hexachlorocyclopentadiene	ND		21.1	4.75	ug/L		10/08/24 15:05	10/10/24 20:14	1
Hexachloroethane	ND		10.6	5.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
Indeno[1,2,3-cd]pyrene	ND		10.6	3.06	ug/L		10/08/24 15:05	10/10/24 20:14	1
Isophorone	ND		10.6	5.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
Naphthalene	39.5		10.6	4.23	ug/L		10/08/24 15:05	10/10/24 20:14	1
Nitrobenzene	ND		10.6	4.97	ug/L		10/08/24 15:05	10/10/24 20:14	1
N-Nitrosodiphenylamine	ND		10.6	3.91	ug/L		10/08/24 15:05	10/10/24 20:14	1
N-Nitrosodi-n-propylamine	ND		10.6	2.64	ug/L		10/08/24 15:05	10/10/24 20:14	1
Pentachlorophenol	ND		21.1	12.6	ug/L		10/08/24 15:05	10/10/24 20:14	1
Phenanthrene	ND		10.6	2.96	ug/L		10/08/24 15:05	10/10/24 20:14	1
Phenol	ND		10.6	4.44	ug/L		10/08/24 15:05	10/10/24 20:14	1
Pyrene	ND		10.6	4.12	ug/L		10/08/24 15:05	10/10/24 20:14	1
Butyl benzyl phthalate	ND		10.6	6.13	ug/L		10/08/24 15:05	10/10/24 20:14	1
bis (2-chloroisopropyl) ether	ND		10.6	1.90	ug/L		10/08/24 15:05	10/10/24 20:14	1
Carbazole	ND		10.6	5.28	ug/L		10/08/24 15:05	10/10/24 20:14	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Date Collected: 10/01/24 10:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		10.6	4.12	ug/L		10/08/24 15:05	10/10/24 20:14	1
4-Nitrophenol	ND		10.6	3.49	ug/L		10/08/24 15:05	10/10/24 20:14	1
Atrazine	ND		10.6	5.28	ug/L		10/08/24 15:05	10/10/24 20:14	1
Benzaldehyde	ND		10.6	2.43	ug/L		10/08/24 15:05	10/10/24 20:14	1
Caprolactam	ND		10.6	2.54	ug/L		10/08/24 15:05	10/10/24 20:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		10 - 150				10/08/24 15:05	10/10/24 20:14	1
2-Fluorobiphenyl (Surr)	61		21 - 114				10/08/24 15:05	10/10/24 20:14	1
2-Fluorophenol (Surr)	47		10 - 105				10/08/24 15:05	10/10/24 20:14	1
Terphenyl-d14 (Surr)	82		13 - 150				10/08/24 15:05	10/10/24 20:14	1
Phenol-d5 (Surr)	39		10 - 129				10/08/24 15:05	10/10/24 20:14	1
Nitrobenzene-d5 (Surr)	54		16 - 127				10/08/24 15:05	10/10/24 20:14	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3.18		1.00	0.390	mg/L			10/08/24 17:59	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 22:25	1
Arsenic	2.25	J	5.00	1.32	ug/L		10/07/24 12:39	10/09/24 22:25	1
Barium	100		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 22:25	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 22:25	1
Cadmium	0.265	J	0.700	0.237	ug/L		10/07/24 12:39	10/09/24 22:25	1
Chromium	7.36		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 22:25	1
Cobalt	6.14		5.00	0.411	ug/L		10/07/24 12:39	10/09/24 22:25	1
Copper	3.90		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 22:25	1
Lead	12.3		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 22:25	1
Manganese	43.2		5.00	1.29	ug/L		10/07/24 12:39	10/09/24 22:25	1
Nickel	18.6		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 22:25	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 22:25	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 22:25	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 22:25	1
Vanadium	2.81	J	5.00	1.22	ug/L		10/07/24 12:39	10/09/24 22:25	1
Zinc	44.4		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 22:25	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	280		25.0	10.0	mg/L			10/03/24 14:13	500
Nitrate Nitrite as N (EPA 353.2)	0.133		0.100	0.0410	mg/L			10/07/24 13:34	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:39	1
Nitrate as N (SM Nitrate by calc)	0.133		0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-4

Lab Sample ID: 752-24759-3

Date Collected: 10/01/24 12:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 13:43	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 13:43	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 13:43	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 13:43	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 13:43	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 13:43	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 13:43	1
1,2-Dichlorobenzene	0.522	J	1.00	0.500	ug/L			10/11/24 13:43	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 13:43	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,3,5-Trimethylbenzene	5.66		1.00	0.560	ug/L			10/11/24 13:43	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 13:43	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,4-Dichlorobenzene	16.7		1.00	0.640	ug/L			10/11/24 13:43	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 13:43	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 13:43	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 13:43	1
Benzene	3.93		1.00	0.240	ug/L			10/11/24 13:43	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 13:43	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 13:43	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 13:43	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 13:43	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 13:43	1
Chlorobenzene	2.15		1.00	0.420	ug/L			10/11/24 13:43	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 13:43	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 13:43	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 13:43	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 13:43	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 13:43	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 13:43	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 13:43	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 13:43	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
Ethylbenzene	31.3		1.00	0.500	ug/L			10/11/24 13:43	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 13:43	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 13:43	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 13:43	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 13:43	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 13:43	1
Isopropylbenzene	1.88		1.00	0.530	ug/L			10/11/24 13:43	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 13:43	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 13:43	1
4-Methyl-2-pentanone (MIBK)	179		25.0	1.80	ug/L			10/11/24 13:43	1
m-Xylene & p-Xylene	55.7		5.00	3.00	ug/L			10/11/24 13:43	1
n-Butylbenzene	1.72		1.00	0.760	ug/L			10/11/24 13:43	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-4

Lab Sample ID: 752-24759-3

Date Collected: 10/01/24 12:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	1.94		1.00	0.690	ug/L			10/11/24 13:43	1
Naphthalene	5.76		5.00	3.00	ug/L			10/11/24 13:43	1
o-Xylene	22.1		5.00	3.00	ug/L			10/11/24 13:43	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 13:43	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 13:43	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 13:43	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 13:43	1
Toluene	28.2		1.00	0.900	ug/L			10/11/24 13:43	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 13:43	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 13:43	1
Trichloroethene	0.611	J	1.00	0.150	ug/L			10/11/24 13:43	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 13:43	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 13:43	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 13:43	1
Xylenes, Total	77.8		10.0	6.00	ug/L			10/11/24 13:43	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 13:43	1
4-Isopropyltoluene	10.7		1.00	0.710	ug/L			10/11/24 13:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 13:43	1
1,2,4-Trimethylbenzene	23.4		1.00	0.820	ug/L			10/11/24 13:43	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 13:43	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 13:43	1
Ethyl acetate	371		10.0	6.14	ug/L			10/11/24 13:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		72 - 130					10/11/24 13:43	1
Dibromofluoromethane	98		75 - 126					10/11/24 13:43	1
Toluene-d8 (Surr)	92		64 - 132					10/11/24 13:43	1
1,2-Dichloroethane-d4 (Surr)	88		67 - 134					10/11/24 13:43	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	325		50.0	20.0	ug/L			10/12/24 12:00	2
2-Butanone (MEK)	624		50.0	5.20	ug/L			10/12/24 12:00	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	100		72 - 130					10/12/24 12:00	2
Dibromofluoromethane	101		75 - 126					10/12/24 12:00	2
Toluene-d8 (Surr)	94		64 - 132					10/12/24 12:00	2
1,2-Dichloroethane-d4 (Surr)	108		67 - 134					10/12/24 12:00	2

Client Sample ID: MW-5

Lab Sample ID: 752-24759-4

Date Collected: 10/01/24 15:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 14:05	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 14:05	1
1,1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 14:05	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 14:05	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-5

Lab Sample ID: 752-24759-4

Date Collected: 10/01/24 15:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 14:05	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 14:05	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 14:05	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 14:05	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 14:05	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,3,5-Trimethylbenzene	0.784	J	1.00	0.560	ug/L			10/11/24 14:05	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 14:05	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,4-Dichlorobenzene	11.7		1.00	0.640	ug/L			10/11/24 14:05	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 14:05	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 14:05	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 14:05	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 14:05	1
Benzene	5.59		1.00	0.240	ug/L			10/11/24 14:05	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 14:05	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 14:05	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 14:05	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 14:05	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 14:05	1
Chlorobenzene	10.1		1.00	0.420	ug/L			10/11/24 14:05	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 14:05	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 14:05	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 14:05	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 14:05	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 14:05	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 14:05	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 14:05	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 14:05	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 14:05	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 14:05	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 14:05	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 14:05	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 14:05	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 14:05	1
Isopropylbenzene	ND		1.00	0.530	ug/L			10/11/24 14:05	1
Methyl tert-butyl ether	0.227	J	1.00	0.220	ug/L			10/11/24 14:05	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 14:05	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 14:05	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 14:05	1
m-Xylene & p-Xylene	7.64		5.00	3.00	ug/L			10/11/24 14:05	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 14:05	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 14:05	1
Naphthalene	ND		5.00	3.00	ug/L			10/11/24 14:05	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 14:05	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-5

Lab Sample ID: 752-24759-4

Date Collected: 10/01/24 15:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 14:05	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 14:05	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 14:05	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 14:05	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 14:05	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 14:05	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 14:05	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 14:05	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 14:05	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 14:05	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 14:05	1
Xylenes, Total	7.98	J	10.0	6.00	ug/L			10/11/24 14:05	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 14:05	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 14:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 14:05	1
1,2,4-Trimethylbenzene	1.83		1.00	0.820	ug/L			10/11/24 14:05	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 14:05	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 14:05	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 14:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		72 - 130					10/11/24 14:05	1
Dibromofluoromethane	111		75 - 126					10/11/24 14:05	1
Toluene-d8 (Surr)	96		64 - 132					10/11/24 14:05	1
1,2-Dichloroethane-d4 (Surr)	90		67 - 134					10/11/24 14:05	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.287	0.287	ug/L		10/08/24 15:02	10/09/24 20:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	28		10 - 140				10/08/24 15:02	10/09/24 20:22	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.47	3.41	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4,5-Trichlorophenol	ND		9.47	3.79	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4,6-Trichlorophenol	ND		9.47	3.31	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4-Dichlorophenol	ND		9.47	4.07	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4-Dimethylphenol	ND	*+	9.47	4.92	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4-Dinitrophenol	ND		28.4	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,4-Dinitrotoluene	ND		9.47	4.83	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Chlorophenol	ND		9.47	3.88	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Chloronaphthalene	ND		9.47	3.60	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Methylnaphthalene	ND		9.47	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Methylphenol	ND		9.47	3.03	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Nitroaniline	ND		9.47	4.73	ug/L		10/08/24 15:05	10/10/24 20:37	1
2-Nitrophenol	ND		9.47	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
3 & 4 Methylphenol	ND		18.9	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
3,3'-Dichlorobenzidine	ND		10.4	10.4	ug/L		10/08/24 15:05	10/10/24 20:37	1
3-Nitroaniline	ND		9.47	4.45	ug/L		10/08/24 15:05	10/10/24 20:37	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-5

Lab Sample ID: 752-24759-4

Date Collected: 10/01/24 15:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		9.47	9.47	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Bromophenyl phenyl ether	ND		9.47	8.14	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Chloro-3-methylphenol	ND		9.47	5.02	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Chloroaniline	ND		9.47	4.45	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Chlorophenyl phenyl ether	ND		9.47	3.50	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Nitroaniline	ND		9.47	3.88	ug/L		10/08/24 15:05	10/10/24 20:37	1
Acenaphthene	ND		9.47	4.17	ug/L		10/08/24 15:05	10/10/24 20:37	1
Acenaphthylene	ND		9.47	3.88	ug/L		10/08/24 15:05	10/10/24 20:37	1
Acetophenone	ND		9.47	4.83	ug/L		10/08/24 15:05	10/10/24 20:37	1
Anthracene	ND		9.47	3.69	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzo[a]anthracene	ND		9.47	6.25	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzo[a]pyrene	ND		9.47	2.75	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzo[b]fluoranthene	ND		9.47	4.92	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzo[g,h,i]perylene	ND		9.47	2.94	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzo[k]fluoranthene	ND		9.47	3.13	ug/L		10/08/24 15:05	10/10/24 20:37	1
Bis(2-chloroethoxy)methane	ND		9.47	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
Bis(2-chloroethyl)ether	ND		9.47	3.69	ug/L		10/08/24 15:05	10/10/24 20:37	1
Bis(2-ethylhexyl) phthalate	ND		9.47	8.43	ug/L		10/08/24 15:05	10/10/24 20:37	1
Chrysene	ND		9.47	6.06	ug/L		10/08/24 15:05	10/10/24 20:37	1
Dibenz(a,h)anthracene	ND		9.47	2.56	ug/L		10/08/24 15:05	10/10/24 20:37	1
Dibenzofuran	ND		9.47	3.79	ug/L		10/08/24 15:05	10/10/24 20:37	1
Di-n-butyl phthalate	ND		9.47	4.36	ug/L		10/08/24 15:05	10/10/24 20:37	1
Diethyl phthalate	ND		9.47	4.17	ug/L		10/08/24 15:05	10/10/24 20:37	1
Dimethyl phthalate	ND		9.47	3.98	ug/L		10/08/24 15:05	10/10/24 20:37	1
Di-n-octyl phthalate	ND		9.47	5.68	ug/L		10/08/24 15:05	10/10/24 20:37	1
Fluoranthene	ND		9.47	3.88	ug/L		10/08/24 15:05	10/10/24 20:37	1
Fluorene	ND		9.47	4.45	ug/L		10/08/24 15:05	10/10/24 20:37	1
Hexachlorobenzene	ND		9.47	9.19	ug/L		10/08/24 15:05	10/10/24 20:37	1
Hexachlorobutadiene	ND		9.47	3.50	ug/L		10/08/24 15:05	10/10/24 20:37	1
Hexachlorocyclopentadiene	ND		18.9	4.26	ug/L		10/08/24 15:05	10/10/24 20:37	1
Hexachloroethane	ND		9.47	4.92	ug/L		10/08/24 15:05	10/10/24 20:37	1
Indeno[1,2,3-cd]pyrene	ND		9.47	2.75	ug/L		10/08/24 15:05	10/10/24 20:37	1
Isophorone	ND		9.47	4.92	ug/L		10/08/24 15:05	10/10/24 20:37	1
Naphthalene	ND		9.47	3.79	ug/L		10/08/24 15:05	10/10/24 20:37	1
Nitrobenzene	ND		9.47	4.45	ug/L		10/08/24 15:05	10/10/24 20:37	1
N-Nitrosodiphenylamine	ND		9.47	3.50	ug/L		10/08/24 15:05	10/10/24 20:37	1
N-Nitrosodi-n-propylamine	ND		9.47	2.37	ug/L		10/08/24 15:05	10/10/24 20:37	1
Pentachlorophenol	ND		18.9	11.3	ug/L		10/08/24 15:05	10/10/24 20:37	1
Phenanthrene	ND		9.47	2.65	ug/L		10/08/24 15:05	10/10/24 20:37	1
Phenol	ND		9.47	3.98	ug/L		10/08/24 15:05	10/10/24 20:37	1
Pyrene	ND		9.47	3.69	ug/L		10/08/24 15:05	10/10/24 20:37	1
Butyl benzyl phthalate	ND		9.47	5.49	ug/L		10/08/24 15:05	10/10/24 20:37	1
bis (2-chloroisopropyl) ether	ND		9.47	1.70	ug/L		10/08/24 15:05	10/10/24 20:37	1
Carbazole	ND		9.47	4.73	ug/L		10/08/24 15:05	10/10/24 20:37	1
2,6-Dinitrotoluene	ND		9.47	3.69	ug/L		10/08/24 15:05	10/10/24 20:37	1
4-Nitrophenol	ND		9.47	3.13	ug/L		10/08/24 15:05	10/10/24 20:37	1
Atrazine	ND		9.47	4.73	ug/L		10/08/24 15:05	10/10/24 20:37	1
Benzaldehyde	ND		9.47	2.18	ug/L		10/08/24 15:05	10/10/24 20:37	1
Caprolactam	ND		9.47	2.27	ug/L		10/08/24 15:05	10/10/24 20:37	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-5
Date Collected: 10/01/24 15:15
Date Received: 10/02/24 08:40

Lab Sample ID: 752-24759-4
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	87		10 - 150	10/08/24 15:05	10/10/24 20:37	1
2-Fluorobiphenyl (Surr)	60		21 - 114	10/08/24 15:05	10/10/24 20:37	1
2-Fluorophenol (Surr)	47		10 - 105	10/08/24 15:05	10/10/24 20:37	1
Terphenyl-d14 (Surr)	86		13 - 150	10/08/24 15:05	10/10/24 20:37	1
Phenol-d5 (Surr)	35		10 - 129	10/08/24 15:05	10/10/24 20:37	1
Nitrobenzene-d5 (Surr)	59		16 - 127	10/08/24 15:05	10/10/24 20:37	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.89		1.00	0.390	mg/L			10/08/24 18:08	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 22:57	1
Arsenic	4.88	J	5.00	1.32	ug/L		10/07/24 12:39	10/09/24 22:57	1
Barium	145		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 22:57	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 22:57	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 22:57	1
Chromium	ND		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 22:57	1
Cobalt	ND		5.00	0.411	ug/L		10/07/24 12:39	10/09/24 22:57	1
Copper	ND		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 22:57	1
Lead	ND		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 22:57	1
Manganese	219		5.00	1.29	ug/L		10/07/24 12:39	10/10/24 23:01	1
Nickel	ND		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 22:57	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 22:57	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 22:57	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 22:57	1
Vanadium	ND		5.00	1.22	ug/L		10/07/24 12:39	10/09/24 22:57	1
Zinc	ND		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 22:57	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.338		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	2.88	F1	0.500	0.200	mg/L			10/03/24 14:18	10
Nitrate Nitrite as N (EPA 353.2)	0.0746	J	0.100	0.0410	mg/L			10/07/24 13:36	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:40	1
Nitrate as N (SM Nitrate by calc)	0.0746	J	0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample ID: MW-6
Date Collected: 10/01/24 13:25
Date Received: 10/02/24 08:40

Lab Sample ID: 752-24759-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 14:27	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 14:27	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 14:27	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-6

Lab Sample ID: 752-24759-5

Date Collected: 10/01/24 13:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 14:27	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 14:27	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 14:27	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 14:27	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 14:27	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,3,5-Trimethylbenzene	0.826	J	1.00	0.560	ug/L			10/11/24 14:27	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 14:27	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,4-Dichlorobenzene	4.08		1.00	0.640	ug/L			10/11/24 14:27	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 14:27	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 14:27	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 14:27	1
Acetone	11.5	J**	25.0	10.0	ug/L			10/11/24 14:27	1
Benzene	5.28		1.00	0.240	ug/L			10/11/24 14:27	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 14:27	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 14:27	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 14:27	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 14:27	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 14:27	1
Chlorobenzene	12.3		1.00	0.420	ug/L			10/11/24 14:27	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 14:27	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 14:27	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 14:27	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 14:27	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 14:27	1
cis-1,2-Dichloroethene	1.64		1.00	0.200	ug/L			10/11/24 14:27	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 14:27	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 14:27	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
Ethylbenzene	25.1		1.00	0.500	ug/L			10/11/24 14:27	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 14:27	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 14:27	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 14:27	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 14:27	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 14:27	1
Isopropylbenzene	0.767	J	1.00	0.530	ug/L			10/11/24 14:27	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 14:27	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 14:27	1
2-Butanone (MEK)	4.31	J**	25.0	2.60	ug/L			10/11/24 14:27	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 14:27	1
m-Xylene & p-Xylene	33.4		5.00	3.00	ug/L			10/11/24 14:27	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 14:27	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 14:27	1
Naphthalene	ND		5.00	3.00	ug/L			10/11/24 14:27	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-6

Lab Sample ID: 752-24759-5

Date Collected: 10/01/24 13:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	13.8		5.00	3.00	ug/L			10/11/24 14:27	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 14:27	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 14:27	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 14:27	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 14:27	1
Toluene	2.21		1.00	0.900	ug/L			10/11/24 14:27	1
trans-1,2-Dichloroethene	0.515	J	1.00	0.500	ug/L			10/11/24 14:27	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 14:27	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 14:27	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 14:27	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 14:27	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 14:27	1
Xylenes, Total	47.1		10.0	6.00	ug/L			10/11/24 14:27	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 14:27	1
4-Isopropyltoluene	0.952	J	1.00	0.710	ug/L			10/11/24 14:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 14:27	1
1,2,4-Trimethylbenzene	2.65		1.00	0.820	ug/L			10/11/24 14:27	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 14:27	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 14:27	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 14:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	91		72 - 130					10/11/24 14:27	1
Dibromofluoromethane	113		75 - 126					10/11/24 14:27	1
Toluene-d8 (Surr)	96		64 - 132					10/11/24 14:27	1
1,2-Dichloroethane-d4 (Surr)	90		67 - 134					10/11/24 14:27	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	1.27		0.310	0.310	ug/L		10/08/24 15:02	10/09/24 20:43	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	28		10 - 140				10/08/24 15:02	10/09/24 20:43	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10.8	3.90	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4,5-Trichlorophenol	ND		10.8	4.34	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4,6-Trichlorophenol	ND		10.8	3.79	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4-Dichlorophenol	ND		10.8	4.66	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4-Dimethylphenol	ND	*+	10.8	5.64	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4-Dinitrophenol	ND		32.5	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,4-Dinitrotoluene	ND		10.8	5.53	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Chlorophenol	ND		10.8	4.44	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Chloronaphthalene	ND		10.8	4.12	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Methylnaphthalene	ND		10.8	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Methylphenol	ND		10.8	3.47	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Nitroaniline	ND		10.8	5.42	ug/L		10/08/24 15:05	10/10/24 21:01	1
2-Nitrophenol	ND		10.8	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
3 & 4 Methylphenol	ND		21.7	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
3,3'-Dichlorobenzidine	ND		11.9	11.9	ug/L		10/08/24 15:05	10/10/24 21:01	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-6

Lab Sample ID: 752-24759-5

Date Collected: 10/01/24 13:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	ND		10.8	5.10	ug/L		10/08/24 15:05	10/10/24 21:01	1
4,6-Dinitro-2-methylphenol	ND		10.8	10.8	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Bromophenyl phenyl ether	ND		10.8	9.32	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Chloro-3-methylphenol	ND		10.8	5.75	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Chloroaniline	ND		10.8	5.10	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Chlorophenyl phenyl ether	ND		10.8	4.01	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Nitroaniline	ND		10.8	4.44	ug/L		10/08/24 15:05	10/10/24 21:01	1
Acenaphthene	ND		10.8	4.77	ug/L		10/08/24 15:05	10/10/24 21:01	1
Acenaphthylene	ND		10.8	4.44	ug/L		10/08/24 15:05	10/10/24 21:01	1
Acetophenone	ND		10.8	5.53	ug/L		10/08/24 15:05	10/10/24 21:01	1
Anthracene	ND		10.8	4.23	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzo[a]anthracene	ND		10.8	7.16	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzo[a]pyrene	ND		10.8	3.14	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzo[b]fluoranthene	ND		10.8	5.64	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzo[g,h,i]perylene	ND		10.8	3.36	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzo[k]fluoranthene	ND		10.8	3.58	ug/L		10/08/24 15:05	10/10/24 21:01	1
Bis(2-chloroethoxy)methane	ND		10.8	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
Bis(2-chloroethyl)ether	ND		10.8	4.23	ug/L		10/08/24 15:05	10/10/24 21:01	1
Bis(2-ethylhexyl) phthalate	ND		10.8	9.65	ug/L		10/08/24 15:05	10/10/24 21:01	1
Chrysene	ND		10.8	6.94	ug/L		10/08/24 15:05	10/10/24 21:01	1
Dibenz(a,h)anthracene	ND		10.8	2.93	ug/L		10/08/24 15:05	10/10/24 21:01	1
Dibenzofuran	ND		10.8	4.34	ug/L		10/08/24 15:05	10/10/24 21:01	1
Di-n-butyl phthalate	ND		10.8	4.99	ug/L		10/08/24 15:05	10/10/24 21:01	1
Diethyl phthalate	ND		10.8	4.77	ug/L		10/08/24 15:05	10/10/24 21:01	1
Dimethyl phthalate	ND		10.8	4.55	ug/L		10/08/24 15:05	10/10/24 21:01	1
Di-n-octyl phthalate	ND		10.8	6.50	ug/L		10/08/24 15:05	10/10/24 21:01	1
Fluoranthene	ND		10.8	4.44	ug/L		10/08/24 15:05	10/10/24 21:01	1
Fluorene	ND		10.8	5.10	ug/L		10/08/24 15:05	10/10/24 21:01	1
Hexachlorobenzene	ND		10.8	10.5	ug/L		10/08/24 15:05	10/10/24 21:01	1
Hexachlorobutadiene	ND		10.8	4.01	ug/L		10/08/24 15:05	10/10/24 21:01	1
Hexachlorocyclopentadiene	ND		21.7	4.88	ug/L		10/08/24 15:05	10/10/24 21:01	1
Hexachloroethane	ND		10.8	5.64	ug/L		10/08/24 15:05	10/10/24 21:01	1
Indeno[1,2,3-cd]pyrene	ND		10.8	3.14	ug/L		10/08/24 15:05	10/10/24 21:01	1
Isophorone	ND		10.8	5.64	ug/L		10/08/24 15:05	10/10/24 21:01	1
Naphthalene	ND		10.8	4.34	ug/L		10/08/24 15:05	10/10/24 21:01	1
Nitrobenzene	ND		10.8	5.10	ug/L		10/08/24 15:05	10/10/24 21:01	1
N-Nitrosodiphenylamine	6.09	J	10.8	4.01	ug/L		10/08/24 15:05	10/10/24 21:01	1
N-Nitrosodi-n-propylamine	ND		10.8	2.71	ug/L		10/08/24 15:05	10/10/24 21:01	1
Pentachlorophenol	ND		21.7	12.9	ug/L		10/08/24 15:05	10/10/24 21:01	1
Phenanthrene	ND		10.8	3.04	ug/L		10/08/24 15:05	10/10/24 21:01	1
Phenol	ND		10.8	4.55	ug/L		10/08/24 15:05	10/10/24 21:01	1
Pyrene	ND		10.8	4.23	ug/L		10/08/24 15:05	10/10/24 21:01	1
Butyl benzyl phthalate	ND		10.8	6.29	ug/L		10/08/24 15:05	10/10/24 21:01	1
bis (2-chloroisopropyl) ether	ND		10.8	1.95	ug/L		10/08/24 15:05	10/10/24 21:01	1
Carbazole	ND		10.8	5.42	ug/L		10/08/24 15:05	10/10/24 21:01	1
2,6-Dinitrotoluene	ND		10.8	4.23	ug/L		10/08/24 15:05	10/10/24 21:01	1
4-Nitrophenol	ND		10.8	3.58	ug/L		10/08/24 15:05	10/10/24 21:01	1
Atrazine	ND		10.8	5.42	ug/L		10/08/24 15:05	10/10/24 21:01	1
Benzaldehyde	ND		10.8	2.49	ug/L		10/08/24 15:05	10/10/24 21:01	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-6

Lab Sample ID: 752-24759-5

Date Collected: 10/01/24 13:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	3.24	J	10.8	2.60	ug/L		10/08/24 15:05	10/10/24 21:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		10 - 150				10/08/24 15:05	10/10/24 21:01	1
2-Fluorobiphenyl (Surr)	68		21 - 114				10/08/24 15:05	10/10/24 21:01	1
2-Fluorophenol (Surr)	55		10 - 105				10/08/24 15:05	10/10/24 21:01	1
Terphenyl-d14 (Surr)	78		13 - 150				10/08/24 15:05	10/10/24 21:01	1
Phenol-d5 (Surr)	42		10 - 129				10/08/24 15:05	10/10/24 21:01	1
Nitrobenzene-d5 (Surr)	63		16 - 127				10/08/24 15:05	10/10/24 21:01	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	1.93		1.00	0.390	mg/L			10/08/24 18:16	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		10.0	4.90	ug/L		10/07/24 12:39	10/10/24 22:57	2
Arsenic	8.53	J	25.0	6.60	ug/L		10/07/24 12:39	10/14/24 17:31	5
Barium	352	^3+	50.0	2.05	ug/L		10/07/24 12:39	10/14/24 17:31	5
Beryllium	3.43		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 23:00	1
Cadmium	1.63	J	3.50	1.19	ug/L		10/07/24 12:39	10/14/24 17:31	5
Chromium	168	^3+	25.0	18.5	ug/L		10/07/24 12:39	10/14/24 17:31	5
Cobalt	7.20	J	10.0	0.822	ug/L		10/07/24 12:39	10/10/24 22:57	2
Copper	71.7	^3+	10.0	3.21	ug/L		10/07/24 12:39	10/14/24 17:31	5
Lead	75.3		2.00	1.73	ug/L		10/07/24 12:39	10/10/24 22:57	2
Manganese	396		10.0	2.58	ug/L		10/07/24 12:39	10/10/24 22:57	2
Nickel	83.7	^3+	25.0	2.11	ug/L		10/07/24 12:39	10/14/24 17:31	5
Selenium	14.6		10.0	4.58	ug/L		10/07/24 12:39	10/10/24 22:57	2
Silver	1.01	J ^3+	5.00	0.835	ug/L		10/07/24 12:39	10/14/24 17:31	5
Thallium	ND		2.00	0.380	ug/L		10/07/24 12:39	10/10/24 22:57	2
Vanadium	261		10.0	2.44	ug/L		10/07/24 12:39	10/10/24 22:57	2
Zinc	1650		20.0	17.8	ug/L		10/07/24 12:39	10/10/24 22:57	2

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.03		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	25.4		2.57	1.03	mg/L			10/03/24 13:35	51.43
Nitrate Nitrite as N (EPA 353.2)	0.0915	J	0.100	0.0410	mg/L			10/07/24 13:38	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:41	1
Nitrate as N (SM Nitrate by calc)	0.0915	J	0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 14:49	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 14:49	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 14:49	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 14:49	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 14:49	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 14:49	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 14:49	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 14:49	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 14:49	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 14:49	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,4-Dichlorobenzene	2.06		1.00	0.640	ug/L			10/11/24 14:49	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 14:49	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 14:49	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 14:49	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 14:49	1
Benzene	3.57		1.00	0.240	ug/L			10/11/24 14:49	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 14:49	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 14:49	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 14:49	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 14:49	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 14:49	1
Chlorobenzene	8.55		1.00	0.420	ug/L			10/11/24 14:49	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 14:49	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 14:49	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 14:49	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 14:49	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 14:49	1
cis-1,2-Dichloroethene	0.247	J	1.00	0.200	ug/L			10/11/24 14:49	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 14:49	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 14:49	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
Ethylbenzene	0.697	J	1.00	0.500	ug/L			10/11/24 14:49	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 14:49	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 14:49	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 14:49	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 14:49	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 14:49	1
Isopropylbenzene	2.03		1.00	0.530	ug/L			10/11/24 14:49	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 14:49	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 14:49	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 14:49	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 14:49	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 14:49	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 14:49	1
N-Propylbenzene	1.85		1.00	0.690	ug/L			10/11/24 14:49	1
Naphthalene	20.7		5.00	3.00	ug/L			10/11/24 14:49	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 14:49	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 14:49	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 14:49	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 14:49	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 14:49	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 14:49	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 14:49	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 14:49	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 14:49	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 14:49	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 14:49	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 14:49	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 14:49	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 14:49	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 14:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 14:49	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 14:49	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 14:49	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 14:49	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 14:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		72 - 130		10/11/24 14:49	1
Dibromofluoromethane	114		75 - 126		10/11/24 14:49	1
Toluene-d8 (Surr)	97		64 - 132		10/11/24 14:49	1
1,2-Dichloroethane-d4 (Surr)	92		67 - 134		10/11/24 14:49	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.317	0.317	ug/L		10/08/24 15:02	10/09/24 21:05	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	26		10 - 140	10/08/24 15:02	10/09/24 21:05	1			

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10.5	3.78	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4,5-Trichlorophenol	ND		10.5	4.20	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4,6-Trichlorophenol	ND		10.5	3.67	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4-Dichlorophenol	ND		10.5	4.51	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4-Dimethylphenol	ND	*+	10.5	5.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4-Dinitrophenol	ND		31.5	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,4-Dinitrotoluene	ND		10.5	5.35	ug/L		10/08/24 15:05	10/10/24 21:25	1
2-Chlorophenol	ND		10.5	4.30	ug/L		10/08/24 15:05	10/10/24 21:25	1
2-Chloronaphthalene	ND		10.5	3.99	ug/L		10/08/24 15:05	10/10/24 21:25	1
2-Methylnaphthalene	ND		10.5	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
2-Methylphenol	ND		10.5	3.36	ug/L		10/08/24 15:05	10/10/24 21:25	1
2-Nitroaniline	ND		10.5	5.25	ug/L		10/08/24 15:05	10/10/24 21:25	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitrophenol	ND		10.5	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
3 & 4 Methylphenol	ND		21.0	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
3,3'-Dichlorobenzidine	ND		11.5	11.5	ug/L		10/08/24 15:05	10/10/24 21:25	1
3-Nitroaniline	ND		10.5	4.93	ug/L		10/08/24 15:05	10/10/24 21:25	1
4,6-Dinitro-2-methylphenol	ND		10.5	10.5	ug/L		10/08/24 15:05	10/10/24 21:25	1
4-Bromophenyl phenyl ether	ND		10.5	9.03	ug/L		10/08/24 15:05	10/10/24 21:25	1
4-Chloro-3-methylphenol	ND		10.5	5.56	ug/L		10/08/24 15:05	10/10/24 21:25	1
4-Chloroaniline	ND		10.5	4.93	ug/L		10/08/24 15:05	10/10/24 21:25	1
4-Chlorophenyl phenyl ether	ND		10.5	3.88	ug/L		10/08/24 15:05	10/10/24 21:25	1
4-Nitroaniline	ND		10.5	4.30	ug/L		10/08/24 15:05	10/10/24 21:25	1
Acenaphthene	ND		10.5	4.62	ug/L		10/08/24 15:05	10/10/24 21:25	1
Acenaphthylene	ND		10.5	4.30	ug/L		10/08/24 15:05	10/10/24 21:25	1
Acetophenone	ND		10.5	5.35	ug/L		10/08/24 15:05	10/10/24 21:25	1
Anthracene	ND		10.5	4.09	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzo[a]anthracene	ND		10.5	6.93	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzo[a]pyrene	ND		10.5	3.04	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzo[b]fluoranthene	ND		10.5	5.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzo[g,h,i]perylene	ND		10.5	3.25	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzo[k]fluoranthene	ND		10.5	3.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
Bis(2-chloroethoxy)methane	ND		10.5	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
Bis(2-chloroethyl)ether	ND		10.5	4.09	ug/L		10/08/24 15:05	10/10/24 21:25	1
Bis(2-ethylhexyl) phthalate	ND		10.5	9.34	ug/L		10/08/24 15:05	10/10/24 21:25	1
Chrysene	ND		10.5	6.72	ug/L		10/08/24 15:05	10/10/24 21:25	1
Dibenz(a,h)anthracene	ND		10.5	2.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
Dibenzofuran	ND		10.5	4.20	ug/L		10/08/24 15:05	10/10/24 21:25	1
Di-n-butyl phthalate	ND		10.5	4.83	ug/L		10/08/24 15:05	10/10/24 21:25	1
Diethyl phthalate	ND		10.5	4.62	ug/L		10/08/24 15:05	10/10/24 21:25	1
Dimethyl phthalate	ND		10.5	4.41	ug/L		10/08/24 15:05	10/10/24 21:25	1
Di-n-octyl phthalate	ND		10.5	6.30	ug/L		10/08/24 15:05	10/10/24 21:25	1
Fluoranthene	ND		10.5	4.30	ug/L		10/08/24 15:05	10/10/24 21:25	1
Fluorene	ND		10.5	4.93	ug/L		10/08/24 15:05	10/10/24 21:25	1
Hexachlorobenzene	ND		10.5	10.2	ug/L		10/08/24 15:05	10/10/24 21:25	1
Hexachlorobutadiene	ND		10.5	3.88	ug/L		10/08/24 15:05	10/10/24 21:25	1
Hexachlorocyclopentadiene	ND		21.0	4.72	ug/L		10/08/24 15:05	10/10/24 21:25	1
Hexachloroethane	ND		10.5	5.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
Indeno[1,2,3-cd]pyrene	ND		10.5	3.04	ug/L		10/08/24 15:05	10/10/24 21:25	1
Isophorone	ND		10.5	5.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
Naphthalene	9.75	J	10.5	4.20	ug/L		10/08/24 15:05	10/10/24 21:25	1
Nitrobenzene	ND		10.5	4.93	ug/L		10/08/24 15:05	10/10/24 21:25	1
N-Nitrosodiphenylamine	ND		10.5	3.88	ug/L		10/08/24 15:05	10/10/24 21:25	1
N-Nitrosodi-n-propylamine	ND		10.5	2.62	ug/L		10/08/24 15:05	10/10/24 21:25	1
Pentachlorophenol	ND		21.0	12.5	ug/L		10/08/24 15:05	10/10/24 21:25	1
Phenanthrene	ND		10.5	2.94	ug/L		10/08/24 15:05	10/10/24 21:25	1
Phenol	ND		10.5	4.41	ug/L		10/08/24 15:05	10/10/24 21:25	1
Pyrene	ND		10.5	4.09	ug/L		10/08/24 15:05	10/10/24 21:25	1
Butyl benzyl phthalate	ND		10.5	6.09	ug/L		10/08/24 15:05	10/10/24 21:25	1
bis (2-chloroisopropyl) ether	ND		10.5	1.89	ug/L		10/08/24 15:05	10/10/24 21:25	1
Carbazole	ND		10.5	5.25	ug/L		10/08/24 15:05	10/10/24 21:25	1
2,6-Dinitrotoluene	ND		10.5	4.09	ug/L		10/08/24 15:05	10/10/24 21:25	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitrophenol	ND		10.5	3.46	ug/L		10/08/24 15:05	10/10/24 21:25	1
Atrazine	ND		10.5	5.25	ug/L		10/08/24 15:05	10/10/24 21:25	1
Benzaldehyde	ND		10.5	2.41	ug/L		10/08/24 15:05	10/10/24 21:25	1
Caprolactam	ND		10.5	2.52	ug/L		10/08/24 15:05	10/10/24 21:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		10 - 150				10/08/24 15:05	10/10/24 21:25	1
2-Fluorobiphenyl (Surr)	66		21 - 114				10/08/24 15:05	10/10/24 21:25	1
2-Fluorophenol (Surr)	49		10 - 105				10/08/24 15:05	10/10/24 21:25	1
Terphenyl-d14 (Surr)	83		13 - 150				10/08/24 15:05	10/10/24 21:25	1
Phenol-d5 (Surr)	39		10 - 129				10/08/24 15:05	10/10/24 21:25	1
Nitrobenzene-d5 (Surr)	59		16 - 127				10/08/24 15:05	10/10/24 21:25	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	0.800	J	1.00	0.390	mg/L			10/08/24 18:25	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 23:04	1
Arsenic	ND		5.00	1.32	ug/L		10/07/24 12:39	10/09/24 23:04	1
Barium	191		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 23:04	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 23:04	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 23:04	1
Chromium	ND		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 23:04	1
Cobalt	1.34	J	5.00	0.411	ug/L		10/07/24 12:39	10/09/24 23:04	1
Copper	8.03		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 23:04	1
Lead	4.43		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 23:04	1
Manganese	1300		5.00	1.29	ug/L		10/07/24 12:39	10/10/24 23:05	1
Nickel	5.32		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 23:04	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 23:04	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 23:04	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 23:04	1
Vanadium	ND		5.00	1.22	ug/L		10/07/24 12:39	10/09/24 23:04	1
Zinc	58.6		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 23:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	30.2		2.57	1.03	mg/L			10/03/24 13:36	51.43
Nitrate Nitrite as N (EPA 353.2)	0.144		0.100	0.0410	mg/L			10/07/24 13:40	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:42	1
Nitrate as N (SM Nitrate by calc)	0.144		0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Date Collected: 10/01/24 11:45

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 15:11	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 15:11	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 15:11	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 15:11	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 15:11	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 15:11	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 15:11	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 15:11	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 15:11	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 15:11	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,4-Dichlorobenzene	1.57		1.00	0.640	ug/L			10/11/24 15:11	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 15:11	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 15:11	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 15:11	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 15:11	1
Benzene	1.91		1.00	0.240	ug/L			10/11/24 15:11	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 15:11	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 15:11	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 15:11	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 15:11	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 15:11	1
Chlorobenzene	3.81		1.00	0.420	ug/L			10/11/24 15:11	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 15:11	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 15:11	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 15:11	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 15:11	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 15:11	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 15:11	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 15:11	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 15:11	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 15:11	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 15:11	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 15:11	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 15:11	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 15:11	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 15:11	1
Isopropylbenzene	0.677	J	1.00	0.530	ug/L			10/11/24 15:11	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 15:11	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 15:11	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 15:11	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 15:11	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Date Collected: 10/01/24 11:45

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 15:11	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 15:11	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 15:11	1
Naphthalene	5.10		5.00	3.00	ug/L			10/11/24 15:11	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 15:11	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 15:11	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 15:11	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 15:11	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 15:11	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 15:11	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:11	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 15:11	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 15:11	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 15:11	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 15:11	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 15:11	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 15:11	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 15:11	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 15:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 15:11	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 15:11	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 15:11	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 15:11	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		72 - 130		10/11/24 15:11	1
Dibromofluoromethane	113		75 - 126		10/11/24 15:11	1
Toluene-d8 (Surr)	96		64 - 132		10/11/24 15:11	1
1,2-Dichloroethane-d4 (Surr)	92		67 - 134		10/11/24 15:11	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	13.7		0.359	0.359	ug/L		10/08/24 15:02	10/09/24 21:26	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	27		10 - 140	10/08/24 15:02	10/09/24 21:26	1			

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.77	3.52	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4,5-Trichlorophenol	ND		9.77	3.91	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4,6-Trichlorophenol	ND		9.77	3.42	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4-Dichlorophenol	ND		9.77	4.20	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4-Dimethylphenol	ND	*+	9.77	5.08	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4-Dinitrophenol	ND		29.3	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
2,4-Dinitrotoluene	ND		9.77	4.98	ug/L		10/08/24 15:05	10/10/24 21:49	1
2-Chlorophenol	ND		9.77	4.00	ug/L		10/08/24 15:05	10/10/24 21:49	1
2-Chloronaphthalene	ND		9.77	3.71	ug/L		10/08/24 15:05	10/10/24 21:49	1
2-Methylnaphthalene	ND		9.77	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
2-Methylphenol	ND		9.77	3.13	ug/L		10/08/24 15:05	10/10/24 21:49	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Date Collected: 10/01/24 11:45

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.77	4.88	ug/L		10/08/24 15:05	10/10/24 21:49	1
2-Nitrophenol	ND		9.77	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
3 & 4 Methylphenol	ND		19.5	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
3,3'-Dichlorobenzidine	ND		10.7	10.7	ug/L		10/08/24 15:05	10/10/24 21:49	1
3-Nitroaniline	ND		9.77	4.59	ug/L		10/08/24 15:05	10/10/24 21:49	1
4,6-Dinitro-2-methylphenol	ND		9.77	9.77	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Bromophenyl phenyl ether	ND		9.77	8.40	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Chloro-3-methylphenol	ND		9.77	5.18	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Chloroaniline	ND		9.77	4.59	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Chlorophenyl phenyl ether	ND		9.77	3.61	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Nitroaniline	ND		9.77	4.00	ug/L		10/08/24 15:05	10/10/24 21:49	1
Acenaphthene	ND		9.77	4.30	ug/L		10/08/24 15:05	10/10/24 21:49	1
Acenaphthylene	ND		9.77	4.00	ug/L		10/08/24 15:05	10/10/24 21:49	1
Acetophenone	ND		9.77	4.98	ug/L		10/08/24 15:05	10/10/24 21:49	1
Anthracene	ND		9.77	3.81	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzo[a]anthracene	ND		9.77	6.45	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzo[a]pyrene	ND		9.77	2.83	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzo[b]fluoranthene	ND		9.77	5.08	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzo[g,h,i]perylene	ND		9.77	3.03	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzo[k]fluoranthene	ND		9.77	3.22	ug/L		10/08/24 15:05	10/10/24 21:49	1
Bis(2-chloroethoxy)methane	ND		9.77	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
Bis(2-chloroethyl)ether	ND		9.77	3.81	ug/L		10/08/24 15:05	10/10/24 21:49	1
Bis(2-ethylhexyl) phthalate	ND		9.77	8.69	ug/L		10/08/24 15:05	10/10/24 21:49	1
Chrysene	ND		9.77	6.25	ug/L		10/08/24 15:05	10/10/24 21:49	1
Dibenz(a,h)anthracene	ND		9.77	2.64	ug/L		10/08/24 15:05	10/10/24 21:49	1
Dibenzofuran	ND		9.77	3.91	ug/L		10/08/24 15:05	10/10/24 21:49	1
Di-n-butyl phthalate	ND		9.77	4.49	ug/L		10/08/24 15:05	10/10/24 21:49	1
Diethyl phthalate	ND		9.77	4.30	ug/L		10/08/24 15:05	10/10/24 21:49	1
Dimethyl phthalate	ND		9.77	4.10	ug/L		10/08/24 15:05	10/10/24 21:49	1
Di-n-octyl phthalate	ND		9.77	5.86	ug/L		10/08/24 15:05	10/10/24 21:49	1
Fluoranthene	ND		9.77	4.00	ug/L		10/08/24 15:05	10/10/24 21:49	1
Fluorene	ND		9.77	4.59	ug/L		10/08/24 15:05	10/10/24 21:49	1
Hexachlorobenzene	ND		9.77	9.47	ug/L		10/08/24 15:05	10/10/24 21:49	1
Hexachlorobutadiene	ND		9.77	3.61	ug/L		10/08/24 15:05	10/10/24 21:49	1
Hexachlorocyclopentadiene	ND		19.5	4.39	ug/L		10/08/24 15:05	10/10/24 21:49	1
Hexachloroethane	ND		9.77	5.08	ug/L		10/08/24 15:05	10/10/24 21:49	1
Indeno[1,2,3-cd]pyrene	ND		9.77	2.83	ug/L		10/08/24 15:05	10/10/24 21:49	1
Isophorone	ND		9.77	5.08	ug/L		10/08/24 15:05	10/10/24 21:49	1
Naphthalene	ND		9.77	3.91	ug/L		10/08/24 15:05	10/10/24 21:49	1
Nitrobenzene	ND		9.77	4.59	ug/L		10/08/24 15:05	10/10/24 21:49	1
N-Nitrosodiphenylamine	ND		9.77	3.61	ug/L		10/08/24 15:05	10/10/24 21:49	1
N-Nitrosodi-n-propylamine	ND		9.77	2.44	ug/L		10/08/24 15:05	10/10/24 21:49	1
Pentachlorophenol	ND		19.5	11.6	ug/L		10/08/24 15:05	10/10/24 21:49	1
Phenanthrene	ND		9.77	2.73	ug/L		10/08/24 15:05	10/10/24 21:49	1
Phenol	ND		9.77	4.10	ug/L		10/08/24 15:05	10/10/24 21:49	1
Pyrene	ND		9.77	3.81	ug/L		10/08/24 15:05	10/10/24 21:49	1
Butyl benzyl phthalate	ND		9.77	5.66	ug/L		10/08/24 15:05	10/10/24 21:49	1
bis (2-chloroisopropyl) ether	ND		9.77	1.76	ug/L		10/08/24 15:05	10/10/24 21:49	1
Carbazole	ND		9.77	4.88	ug/L		10/08/24 15:05	10/10/24 21:49	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Date Collected: 10/01/24 11:45

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.77	3.81	ug/L		10/08/24 15:05	10/10/24 21:49	1
4-Nitrophenol	ND		9.77	3.22	ug/L		10/08/24 15:05	10/10/24 21:49	1
Atrazine	ND		9.77	4.88	ug/L		10/08/24 15:05	10/10/24 21:49	1
Benzaldehyde	ND		9.77	2.25	ug/L		10/08/24 15:05	10/10/24 21:49	1
Caprolactam	ND		9.77	2.34	ug/L		10/08/24 15:05	10/10/24 21:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	85		10 - 150				10/08/24 15:05	10/10/24 21:49	1
2-Fluorobiphenyl (Surr)	61		21 - 114				10/08/24 15:05	10/10/24 21:49	1
2-Fluorophenol (Surr)	47		10 - 105				10/08/24 15:05	10/10/24 21:49	1
Terphenyl-d14 (Surr)	82		13 - 150				10/08/24 15:05	10/10/24 21:49	1
Phenol-d5 (Surr)	35		10 - 129				10/08/24 15:05	10/10/24 21:49	1
Nitrobenzene-d5 (Surr)	57		16 - 127				10/08/24 15:05	10/10/24 21:49	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.00		1.00	0.390	mg/L			10/08/24 18:34	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 23:08	1
Arsenic	ND		5.00	1.32	ug/L		10/07/24 12:39	10/09/24 23:08	1
Barium	153		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 23:08	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 23:08	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 23:08	1
Chromium	ND		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 23:08	1
Cobalt	2.15	J	5.00	0.411	ug/L		10/07/24 12:39	10/09/24 23:08	1
Copper	1.38	J	2.00	0.642	ug/L		10/07/24 12:39	10/09/24 23:08	1
Lead	ND		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 23:08	1
Manganese	540		50.0	12.9	ug/L		10/07/24 12:39	10/14/24 18:20	10
Nickel	5.17		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 23:08	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 23:08	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 23:08	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 23:08	1
Vanadium	1.22	J	5.00	1.22	ug/L		10/07/24 12:39	10/09/24 23:08	1
Zinc	ND		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 23:08	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	90.9		2.57	1.03	mg/L			10/03/24 13:41	51.43
Nitrate Nitrite as N (EPA 353.2)	0.563		0.100	0.0410	mg/L			10/07/24 13:42	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:42	1
Nitrate as N (SM Nitrate by calc)	0.563		0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Date Collected: 10/01/24 12:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 15:33	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 15:33	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 15:33	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 15:33	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 15:33	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 15:33	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 15:33	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 15:33	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 15:33	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 15:33	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,4-Dichlorobenzene	0.683	J	1.00	0.640	ug/L			10/11/24 15:33	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 15:33	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 15:33	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 15:33	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 15:33	1
Benzene	1.75		1.00	0.240	ug/L			10/11/24 15:33	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 15:33	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 15:33	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 15:33	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 15:33	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 15:33	1
Chlorobenzene	4.83		1.00	0.420	ug/L			10/11/24 15:33	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 15:33	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 15:33	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 15:33	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 15:33	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 15:33	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 15:33	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 15:33	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 15:33	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 15:33	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 15:33	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 15:33	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 15:33	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 15:33	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 15:33	1
Isopropylbenzene	ND		1.00	0.530	ug/L			10/11/24 15:33	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 15:33	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 15:33	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 15:33	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 15:33	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Date Collected: 10/01/24 12:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 15:33	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 15:33	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 15:33	1
Naphthalene	4.86	J	5.00	3.00	ug/L			10/11/24 15:33	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 15:33	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 15:33	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 15:33	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 15:33	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 15:33	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 15:33	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:33	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 15:33	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 15:33	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 15:33	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 15:33	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 15:33	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 15:33	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 15:33	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 15:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 15:33	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 15:33	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 15:33	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 15:33	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 15:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		72 - 130		10/11/24 15:33	1
Dibromofluoromethane	113		75 - 126		10/11/24 15:33	1
Toluene-d8 (Surr)	94		64 - 132		10/11/24 15:33	1
1,2-Dichloroethane-d4 (Surr)	90		67 - 134		10/11/24 15:33	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	13.9		0.337	0.337	ug/L		10/08/24 15:02	10/09/24 21:48	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	25		10 - 140	10/08/24 15:02	10/09/24 21:48	1			

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.81	3.53	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4,5-Trichlorophenol	ND		9.81	3.92	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4,6-Trichlorophenol	ND		9.81	3.43	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4-Dichlorophenol	ND		9.81	4.22	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4-Dimethylphenol	ND	*+	9.81	5.10	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4-Dinitrophenol	ND		29.4	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
2,4-Dinitrotoluene	ND		9.81	5.00	ug/L		10/08/24 15:05	10/10/24 22:13	1
2-Chlorophenol	ND		9.81	4.02	ug/L		10/08/24 15:05	10/10/24 22:13	1
2-Chloronaphthalene	ND		9.81	3.73	ug/L		10/08/24 15:05	10/10/24 22:13	1
2-Methylnaphthalene	ND		9.81	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
2-Methylphenol	ND		9.81	3.14	ug/L		10/08/24 15:05	10/10/24 22:13	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Date Collected: 10/01/24 12:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.81	4.91	ug/L		10/08/24 15:05	10/10/24 22:13	1
2-Nitrophenol	ND		9.81	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
3 & 4 Methylphenol	ND		19.6	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
3,3'-Dichlorobenzidine	ND		10.8	10.8	ug/L		10/08/24 15:05	10/10/24 22:13	1
3-Nitroaniline	ND		9.81	4.61	ug/L		10/08/24 15:05	10/10/24 22:13	1
4,6-Dinitro-2-methylphenol	ND		9.81	9.81	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Bromophenyl phenyl ether	ND		9.81	8.44	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Chloro-3-methylphenol	ND		9.81	5.20	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Chloroaniline	ND		9.81	4.61	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Chlorophenyl phenyl ether	ND		9.81	3.63	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Nitroaniline	ND		9.81	4.02	ug/L		10/08/24 15:05	10/10/24 22:13	1
Acenaphthene	ND		9.81	4.32	ug/L		10/08/24 15:05	10/10/24 22:13	1
Acenaphthylene	ND		9.81	4.02	ug/L		10/08/24 15:05	10/10/24 22:13	1
Acetophenone	ND		9.81	5.00	ug/L		10/08/24 15:05	10/10/24 22:13	1
Anthracene	ND		9.81	3.83	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzo[a]anthracene	ND		9.81	6.48	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzo[a]pyrene	ND		9.81	2.85	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzo[b]fluoranthene	ND		9.81	5.10	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzo[g,h,i]perylene	ND		9.81	3.04	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzo[k]fluoranthene	ND		9.81	3.24	ug/L		10/08/24 15:05	10/10/24 22:13	1
Bis(2-chloroethoxy)methane	ND		9.81	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
Bis(2-chloroethyl)ether	ND		9.81	3.83	ug/L		10/08/24 15:05	10/10/24 22:13	1
Bis(2-ethylhexyl) phthalate	ND		9.81	8.73	ug/L		10/08/24 15:05	10/10/24 22:13	1
Chrysene	ND		9.81	6.28	ug/L		10/08/24 15:05	10/10/24 22:13	1
Dibenz(a,h)anthracene	ND		9.81	2.65	ug/L		10/08/24 15:05	10/10/24 22:13	1
Dibenzofuran	ND		9.81	3.92	ug/L		10/08/24 15:05	10/10/24 22:13	1
Di-n-butyl phthalate	ND		9.81	4.51	ug/L		10/08/24 15:05	10/10/24 22:13	1
Diethyl phthalate	ND		9.81	4.32	ug/L		10/08/24 15:05	10/10/24 22:13	1
Dimethyl phthalate	ND		9.81	4.12	ug/L		10/08/24 15:05	10/10/24 22:13	1
Di-n-octyl phthalate	ND		9.81	5.89	ug/L		10/08/24 15:05	10/10/24 22:13	1
Fluoranthene	ND		9.81	4.02	ug/L		10/08/24 15:05	10/10/24 22:13	1
Fluorene	ND		9.81	4.61	ug/L		10/08/24 15:05	10/10/24 22:13	1
Hexachlorobenzene	ND		9.81	9.52	ug/L		10/08/24 15:05	10/10/24 22:13	1
Hexachlorobutadiene	ND		9.81	3.63	ug/L		10/08/24 15:05	10/10/24 22:13	1
Hexachlorocyclopentadiene	ND		19.6	4.42	ug/L		10/08/24 15:05	10/10/24 22:13	1
Hexachloroethane	ND		9.81	5.10	ug/L		10/08/24 15:05	10/10/24 22:13	1
Indeno[1,2,3-cd]pyrene	ND		9.81	2.85	ug/L		10/08/24 15:05	10/10/24 22:13	1
Isophorone	ND		9.81	5.10	ug/L		10/08/24 15:05	10/10/24 22:13	1
Naphthalene	4.62	J	9.81	3.92	ug/L		10/08/24 15:05	10/10/24 22:13	1
Nitrobenzene	ND		9.81	4.61	ug/L		10/08/24 15:05	10/10/24 22:13	1
N-Nitrosodiphenylamine	ND		9.81	3.63	ug/L		10/08/24 15:05	10/10/24 22:13	1
N-Nitrosodi-n-propylamine	ND		9.81	2.45	ug/L		10/08/24 15:05	10/10/24 22:13	1
Pentachlorophenol	ND		19.6	11.7	ug/L		10/08/24 15:05	10/10/24 22:13	1
Phenanthrene	ND		9.81	2.75	ug/L		10/08/24 15:05	10/10/24 22:13	1
Phenol	ND		9.81	4.12	ug/L		10/08/24 15:05	10/10/24 22:13	1
Pyrene	ND		9.81	3.83	ug/L		10/08/24 15:05	10/10/24 22:13	1
Butyl benzyl phthalate	ND		9.81	5.69	ug/L		10/08/24 15:05	10/10/24 22:13	1
bis (2-chloroisopropyl) ether	ND		9.81	1.77	ug/L		10/08/24 15:05	10/10/24 22:13	1
Carbazole	ND		9.81	4.91	ug/L		10/08/24 15:05	10/10/24 22:13	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Date Collected: 10/01/24 12:25

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.81	3.83	ug/L		10/08/24 15:05	10/10/24 22:13	1
4-Nitrophenol	ND		9.81	3.24	ug/L		10/08/24 15:05	10/10/24 22:13	1
Atrazine	ND		9.81	4.91	ug/L		10/08/24 15:05	10/10/24 22:13	1
Benzaldehyde	ND		9.81	2.26	ug/L		10/08/24 15:05	10/10/24 22:13	1
Caprolactam	2.84	J	9.81	2.35	ug/L		10/08/24 15:05	10/10/24 22:13	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		10 - 150				10/08/24 15:05	10/10/24 22:13	1
2-Fluorobiphenyl (Surr)	58		21 - 114				10/08/24 15:05	10/10/24 22:13	1
2-Fluorophenol (Surr)	45		10 - 105				10/08/24 15:05	10/10/24 22:13	1
Terphenyl-d14 (Surr)	79		13 - 150				10/08/24 15:05	10/10/24 22:13	1
Phenol-d5 (Surr)	34		10 - 129				10/08/24 15:05	10/10/24 22:13	1
Nitrobenzene-d5 (Surr)	54		16 - 127				10/08/24 15:05	10/10/24 22:13	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	3.45		1.00	0.390	mg/L			10/08/24 19:25	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 23:12	1
Arsenic	6.52		5.00	1.32	ug/L		10/07/24 12:39	10/09/24 23:12	1
Barium	150		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 23:12	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 23:12	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 23:12	1
Chromium	ND		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 23:12	1
Cobalt	0.796	J	5.00	0.411	ug/L		10/07/24 12:39	10/09/24 23:12	1
Copper	ND		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 23:12	1
Lead	1.26		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 23:12	1
Manganese	131		5.00	1.29	ug/L		10/07/24 12:39	10/09/24 23:12	1
Nickel	2.31	J	5.00	0.422	ug/L		10/07/24 12:39	10/09/24 23:12	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 23:12	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 23:12	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 23:12	1
Vanadium	6.71		5.00	1.22	ug/L		10/07/24 12:39	10/09/24 23:12	1
Zinc	ND		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 23:12	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	51.5		2.57	1.03	mg/L			10/03/24 13:43	51.43
Nitrate Nitrite as N (EPA 353.2)	0.123		0.100	0.0410	mg/L			10/07/24 13:44	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:43	1
Nitrate as N (SM Nitrate by calc)	0.123		0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 15:55	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 15:55	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 15:55	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 15:55	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 15:55	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 15:55	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 15:55	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 15:55	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,3,5-Trimethylbenzene	1.59		1.00	0.560	ug/L			10/11/24 15:55	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 15:55	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,4-Dichlorobenzene	4.65		1.00	0.640	ug/L			10/11/24 15:55	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 15:55	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 15:55	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 15:55	1
Acetone	11.6	J**	25.0	10.0	ug/L			10/11/24 15:55	1
Benzene	13.2		1.00	0.240	ug/L			10/11/24 15:55	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 15:55	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 15:55	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 15:55	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 15:55	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 15:55	1
Chlorobenzene	9.60		1.00	0.420	ug/L			10/11/24 15:55	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 15:55	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 15:55	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 15:55	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 15:55	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 15:55	1
cis-1,2-Dichloroethene	0.950	J	1.00	0.200	ug/L			10/11/24 15:55	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 15:55	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 15:55	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
Ethylbenzene	6.43		1.00	0.500	ug/L			10/11/24 15:55	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 15:55	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 15:55	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 15:55	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 15:55	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 15:55	1
Isopropylbenzene	1.64		1.00	0.530	ug/L			10/11/24 15:55	1
Methyl tert-butyl ether	0.281	J	1.00	0.220	ug/L			10/11/24 15:55	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 15:55	1
2-Butanone (MEK)	ND	*	25.0	2.60	ug/L			10/11/24 15:55	1
4-Methyl-2-pentanone (MIBK)	2.10	J	25.0	1.80	ug/L			10/11/24 15:55	1

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Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	27.1		5.00	3.00	ug/L			10/11/24 15:55	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 15:55	1
N-Propylbenzene	1.38		1.00	0.690	ug/L			10/11/24 15:55	1
Naphthalene	59.8		5.00	3.00	ug/L			10/11/24 15:55	1
o-Xylene	3.27 J		5.00	3.00	ug/L			10/11/24 15:55	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 15:55	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 15:55	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 15:55	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 15:55	1
Toluene	5.77		1.00	0.900	ug/L			10/11/24 15:55	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 15:55	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 15:55	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 15:55	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 15:55	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 15:55	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 15:55	1
Xylenes, Total	30.3		10.0	6.00	ug/L			10/11/24 15:55	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 15:55	1
4-Isopropyltoluene	4.13		1.00	0.710	ug/L			10/11/24 15:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 15:55	1
1,2,4-Trimethylbenzene	3.26		1.00	0.820	ug/L			10/11/24 15:55	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 15:55	1
n-Heptane	0.860 J		1.00	0.210	ug/L			10/11/24 15:55	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 15:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	96		72 - 130		10/11/24 15:55	1
Dibromofluoromethane	113		75 - 126		10/11/24 15:55	1
Toluene-d8 (Surr)	95		64 - 132		10/11/24 15:55	1
1,2-Dichloroethane-d4 (Surr)	93		67 - 134		10/11/24 15:55	1

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	34.2		0.286	0.286	ug/L		10/08/24 15:02	10/09/24 22:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	27		10 - 140				10/08/24 15:02	10/09/24 22:09	1

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.99	3.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4,5-Trichlorophenol	ND		9.99	4.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4,6-Trichlorophenol	ND		9.99	3.50	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4-Dichlorophenol	ND		9.99	4.30	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4-Dimethylphenol	ND	*+	9.99	5.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4-Dinitrophenol	ND		30.0	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
2,4-Dinitrotoluene	ND		9.99	5.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
2-Chlorophenol	ND		9.99	4.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
2-Chloronaphthalene	ND		9.99	3.80	ug/L		10/08/24 15:05	10/10/24 22:37	1
2-Methylnaphthalene	4.68 J		9.99	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
2-Methylphenol	ND		9.99	3.20	ug/L		10/08/24 15:05	10/10/24 22:37	1

Eurofins Raleigh

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	ND		9.99	5.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
2-Nitrophenol	ND		9.99	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
3 & 4 Methylphenol	15.3	J	20.0	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
3,3'-Dichlorobenzidine	ND		11.0	11.0	ug/L		10/08/24 15:05	10/10/24 22:37	1
3-Nitroaniline	ND		9.99	4.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
4,6-Dinitro-2-methylphenol	ND		9.99	9.99	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Bromophenyl phenyl ether	ND		9.99	8.59	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Chloro-3-methylphenol	ND		9.99	5.30	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Chloroaniline	ND		9.99	4.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Chlorophenyl phenyl ether	ND		9.99	3.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Nitroaniline	ND		9.99	4.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
Acenaphthene	ND		9.99	4.40	ug/L		10/08/24 15:05	10/10/24 22:37	1
Acenaphthylene	ND		9.99	4.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
Acetophenone	ND		9.99	5.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
Anthracene	ND		9.99	3.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzo[a]anthracene	ND		9.99	6.59	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzo[a]pyrene	ND		9.99	2.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzo[b]fluoranthene	ND		9.99	5.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzo[g,h,i]perylene	ND		9.99	3.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzo[k]fluoranthene	ND		9.99	3.30	ug/L		10/08/24 15:05	10/10/24 22:37	1
Bis(2-chloroethoxy)methane	ND		9.99	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
Bis(2-chloroethyl)ether	ND		9.99	3.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
Bis(2-ethylhexyl) phthalate	ND		9.99	8.89	ug/L		10/08/24 15:05	10/10/24 22:37	1
Chrysene	ND		9.99	6.39	ug/L		10/08/24 15:05	10/10/24 22:37	1
Dibenz(a,h)anthracene	ND		9.99	2.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
Dibenzofuran	ND		9.99	4.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
Di-n-butyl phthalate	8.54	J	9.99	4.60	ug/L		10/08/24 15:05	10/10/24 22:37	1
Diethyl phthalate	30.5		9.99	4.40	ug/L		10/08/24 15:05	10/10/24 22:37	1
Dimethyl phthalate	ND		9.99	4.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
Di-n-octyl phthalate	ND		9.99	6.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
Fluoranthene	ND		9.99	4.10	ug/L		10/08/24 15:05	10/10/24 22:37	1
Fluorene	ND		9.99	4.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
Hexachlorobenzene	ND		9.99	9.69	ug/L		10/08/24 15:05	10/10/24 22:37	1
Hexachlorobutadiene	ND		9.99	3.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
Hexachlorocyclopentadiene	ND		20.0	4.50	ug/L		10/08/24 15:05	10/10/24 22:37	1
Hexachloroethane	ND		9.99	5.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
Indeno[1,2,3-cd]pyrene	ND		9.99	2.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
Isophorone	ND		9.99	5.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
Naphthalene	45.3		9.99	4.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
Nitrobenzene	ND		9.99	4.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
N-Nitrosodiphenylamine	ND		9.99	3.70	ug/L		10/08/24 15:05	10/10/24 22:37	1
N-Nitrosodi-n-propylamine	ND		9.99	2.50	ug/L		10/08/24 15:05	10/10/24 22:37	1
Pentachlorophenol	ND		20.0	11.9	ug/L		10/08/24 15:05	10/10/24 22:37	1
Phenanthrene	ND		9.99	2.80	ug/L		10/08/24 15:05	10/10/24 22:37	1
Phenol	ND		9.99	4.20	ug/L		10/08/24 15:05	10/10/24 22:37	1
Pyrene	ND		9.99	3.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
Butyl benzyl phthalate	ND		9.99	5.80	ug/L		10/08/24 15:05	10/10/24 22:37	1
bis (2-chloroisopropyl) ether	ND		9.99	1.80	ug/L		10/08/24 15:05	10/10/24 22:37	1
Carbazole	ND		9.99	5.00	ug/L		10/08/24 15:05	10/10/24 22:37	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		9.99	3.90	ug/L		10/08/24 15:05	10/10/24 22:37	1
4-Nitrophenol	ND		9.99	3.30	ug/L		10/08/24 15:05	10/10/24 22:37	1
Atrazine	ND		9.99	5.00	ug/L		10/08/24 15:05	10/10/24 22:37	1
Benzaldehyde	ND		9.99	2.30	ug/L		10/08/24 15:05	10/10/24 22:37	1
Caprolactam	ND		9.99	2.40	ug/L		10/08/24 15:05	10/10/24 22:37	1

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		10 - 150				10/08/24 15:05	10/10/24 22:37	1
2-Fluorobiphenyl (Surr)	67		21 - 114				10/08/24 15:05	10/10/24 22:37	1
2-Fluorophenol (Surr)	50		10 - 105				10/08/24 15:05	10/10/24 22:37	1
Terphenyl-d14 (Surr)	80		13 - 150				10/08/24 15:05	10/10/24 22:37	1
Phenol-d5 (Surr)	39		10 - 129				10/08/24 15:05	10/10/24 22:37	1
Nitrobenzene-d5 (Surr)	61		16 - 127				10/08/24 15:05	10/10/24 22:37	1

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	2.40		1.00	0.390	mg/L			10/08/24 19:50	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 23:16	1
Arsenic	2.18	J	5.00	1.32	ug/L		10/07/24 12:39	10/09/24 23:16	1
Barium	103		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 23:16	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 23:16	1
Cadmium	0.239	J	0.700	0.237	ug/L		10/07/24 12:39	10/09/24 23:16	1
Chromium	7.28		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 23:16	1
Cobalt	5.83		5.00	0.411	ug/L		10/07/24 12:39	10/09/24 23:16	1
Copper	3.96		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 23:16	1
Lead	11.9		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 23:16	1
Manganese	41.1		5.00	1.29	ug/L		10/07/24 12:39	10/09/24 23:16	1
Nickel	18.4		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 23:16	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 23:16	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 23:16	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 23:16	1
Vanadium	2.73	J	5.00	1.22	ug/L		10/07/24 12:39	10/09/24 23:16	1
Zinc	45.4		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 23:16	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 20:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	263		25.0	10.0	mg/L			10/03/24 14:23	500
Nitrate Nitrite as N (EPA 353.2)	0.0789	J	0.100	0.0410	mg/L			10/07/24 13:45	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			10/02/24 15:44	1
Nitrate as N (SM Nitrate by calc)	0.0789	J	0.100	0.0250	mg/L			10/08/24 20:17	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: Trip Blank

Lab Sample ID: 752-24759-10

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 09:19	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 09:19	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 09:19	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 09:19	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 09:19	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 09:19	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 09:19	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 09:19	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 09:19	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 09:19	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,4-Dichlorobenzene	ND		1.00	0.640	ug/L			10/11/24 09:19	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 09:19	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 09:19	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 09:19	1
Acetone	ND	*+	25.0	10.0	ug/L			10/11/24 09:19	1
Benzene	ND		1.00	0.240	ug/L			10/11/24 09:19	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 09:19	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 09:19	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 09:19	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 09:19	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 09:19	1
Chlorobenzene	ND		1.00	0.420	ug/L			10/11/24 09:19	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 09:19	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 09:19	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 09:19	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 09:19	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 09:19	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 09:19	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 09:19	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 09:19	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 09:19	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 09:19	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 09:19	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 09:19	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 09:19	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 09:19	1
Isopropylbenzene	ND		1.00	0.530	ug/L			10/11/24 09:19	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 09:19	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 09:19	1
2-Butanone (MEK)	ND	*+	25.0	2.60	ug/L			10/11/24 09:19	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 09:19	1

Client Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: Trip Blank

Lab Sample ID: 752-24759-10

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 09:19	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 09:19	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 09:19	1
Naphthalene	ND		5.00	3.00	ug/L			10/11/24 09:19	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 09:19	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 09:19	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 09:19	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 09:19	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 09:19	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 09:19	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 09:19	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 09:19	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 09:19	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 09:19	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 09:19	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 09:19	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 09:19	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 09:19	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 09:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 09:19	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 09:19	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 09:19	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 09:19	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 09:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		72 - 130					10/11/24 09:19	1
Dibromofluoromethane	111		75 - 126					10/11/24 09:19	1
Toluene-d8 (Surr)	101		64 - 132					10/11/24 09:19	1
1,2-Dichloroethane-d4 (Surr)	88		67 - 134					10/11/24 09:19	1

Surrogate Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		BFB (72-130)	DBFM (75-126)	TOL (64-132)	DCA (67-134)
752-24759-1	MW-1	104	112	95	87
752-24759-1 MS	MW-1	102	98	97	83
752-24759-1 MSD	MW-1	98	98	93	89
752-24759-2	MW-3	96	112	93	93
752-24759-3	MW-4	95	98	92	88
752-24759-3 - DL	MW-4	100	101	94	108
752-24759-4	MW-5	95	111	96	90
752-24759-5	MW-6	91	113	96	90
752-24759-6	MW-7	90	114	97	92
752-24759-7	MW-8	92	113	96	92
752-24759-8	MW-9	90	113	94	90
752-24759-9	DUP-01	96	113	95	93
752-24759-10	Trip Blank	90	111	101	88
LCS 400-687530/1002	Lab Control Sample	100	96	101	83
LCS 400-687694/1002	Lab Control Sample	103	98	97	105
MB 400-687530/5	Method Blank	92	111	100	85
MB 400-687694/4	Method Blank	98	99	94	103

Surrogate Legend

- BFB = 4-Bromofluorobenzene
- DBFM = Dibromofluoromethane
- TOL = Toluene-d8 (Surr)
- DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (10-150)	FBP (21-114)	2FP (10-105)	TPHL (13-150)	PHL (10-129)	NBZ (16-127)
752-24759-1	MW-1	90	70	53	90	39	66
752-24759-2	MW-3	84	61	47	82	39	54
752-24759-4	MW-5	87	60	47	86	35	59
752-24759-5	MW-6	90	68	55	78	42	63
752-24759-6	MW-7	90	66	49	83	39	59
752-24759-7	MW-8	85	61	47	82	35	57
752-24759-8	MW-9	84	58	45	79	34	54
752-24759-9	DUP-01	90	67	50	80	39	61
LCS 400-687183/2-A	Lab Control Sample	86	68	56	76	47	66
LCSD 400-687183/3-A	Lab Control Sample Dup	92	73	59	83	48	73
MB 400-687183/1-A	Method Blank	81	58	48	88	34	65

Surrogate Legend

- TBP = 2,4,6-Tribromophenol (Surr)
- FBP = 2-Fluorobiphenyl (Surr)
- 2FP = 2-Fluorophenol (Surr)
- TPHL = Terphenyl-d14 (Surr)
- PHL = Phenol-d5 (Surr)
- NBZ = Nitrobenzene-d5 (Surr)

Isotope Dilution Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DXE (10-140)
752-24759-1	MW-1	28
752-24759-2	MW-3	26
752-24759-4	MW-5	28
752-24759-5	MW-6	28
752-24759-6	MW-7	26
752-24759-7	MW-8	27
752-24759-8	MW-9	25
752-24759-9	DUP-01	27
LCS 400-687179/2-A	Lab Control Sample	21
LCSD 400-687179/3-A	Lab Control Sample Dup	31
MB 400-687179/1-A	Method Blank	29

Surrogate Legend

DXE = 1,4-Dioxane-d8

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 400-687530/5

Matrix: Water

Analysis Batch: 687530

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			10/11/24 08:35	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			10/11/24 08:35	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			10/11/24 08:35	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			10/11/24 08:35	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			10/11/24 08:35	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			10/11/24 08:35	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			10/11/24 08:35	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			10/11/24 08:35	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			10/11/24 08:35	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			10/11/24 08:35	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,4-Dichlorobenzene	ND		1.00	0.640	ug/L			10/11/24 08:35	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			10/11/24 08:35	1
2-Hexanone	ND		25.0	4.26	ug/L			10/11/24 08:35	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			10/11/24 08:35	1
Acetone	ND		25.0	10.0	ug/L			10/11/24 08:35	1
Benzene	ND		1.00	0.240	ug/L			10/11/24 08:35	1
Bromobenzene	ND		1.00	0.540	ug/L			10/11/24 08:35	1
Bromoform	ND		5.00	0.250	ug/L			10/11/24 08:35	1
Bromomethane	ND		1.00	0.980	ug/L			10/11/24 08:35	1
Carbon disulfide	ND		1.00	0.500	ug/L			10/11/24 08:35	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			10/11/24 08:35	1
Chlorobenzene	ND		1.00	0.420	ug/L			10/11/24 08:35	1
Chlorobromomethane	ND		1.00	0.520	ug/L			10/11/24 08:35	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			10/11/24 08:35	1
Chloroethane	ND		1.00	0.760	ug/L			10/11/24 08:35	1
Chloroform	ND		1.00	0.900	ug/L			10/11/24 08:35	1
Chloromethane	ND		1.00	0.400	ug/L			10/11/24 08:35	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			10/11/24 08:35	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			10/11/24 08:35	1
Dibromomethane	ND		5.00	0.220	ug/L			10/11/24 08:35	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
Ethylbenzene	ND		1.00	0.500	ug/L			10/11/24 08:35	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			10/11/24 08:35	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			10/11/24 08:35	1
Hexane	ND		1.00	0.960	ug/L			10/11/24 08:35	1
Iodomethane	ND		1.00	0.900	ug/L			10/11/24 08:35	1
Isopropyl ether	ND		1.00	0.740	ug/L			10/11/24 08:35	1
Isopropylbenzene	ND		1.00	0.530	ug/L			10/11/24 08:35	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			10/11/24 08:35	1
Methylene Chloride	ND		5.00	3.00	ug/L			10/11/24 08:35	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			10/11/24 08:35	1

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 400-687530/5
Matrix: Water
Analysis Batch: 687530

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			10/11/24 08:35	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			10/11/24 08:35	1
n-Butylbenzene	ND		1.00	0.760	ug/L			10/11/24 08:35	1
N-Propylbenzene	ND		1.00	0.690	ug/L			10/11/24 08:35	1
Naphthalene	ND		5.00	3.00	ug/L			10/11/24 08:35	1
o-Xylene	ND		5.00	3.00	ug/L			10/11/24 08:35	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			10/11/24 08:35	1
Styrene	ND		1.00	1.00	ug/L			10/11/24 08:35	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			10/11/24 08:35	1
Tetrachloroethene	ND		1.00	0.330	ug/L			10/11/24 08:35	1
Toluene	ND		1.00	0.900	ug/L			10/11/24 08:35	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			10/11/24 08:35	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			10/11/24 08:35	1
Trichloroethene	ND		1.00	0.150	ug/L			10/11/24 08:35	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			10/11/24 08:35	1
Vinyl acetate	ND		25.0	0.930	ug/L			10/11/24 08:35	1
Vinyl chloride	ND		1.00	0.500	ug/L			10/11/24 08:35	1
Xylenes, Total	ND		10.0	6.00	ug/L			10/11/24 08:35	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			10/11/24 08:35	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			10/11/24 08:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			10/11/24 08:35	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			10/11/24 08:35	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			10/11/24 08:35	1
n-Heptane	ND		1.00	0.210	ug/L			10/11/24 08:35	1
Ethyl acetate	ND		10.0	6.14	ug/L			10/11/24 08:35	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	92		72 - 130		10/11/24 08:35	1
Dibromofluoromethane	111		75 - 126		10/11/24 08:35	1
Toluene-d8 (Surr)	100		64 - 132		10/11/24 08:35	1
1,2-Dichloroethane-d4 (Surr)	85		67 - 134		10/11/24 08:35	1

Lab Sample ID: LCS 400-687530/1002
Matrix: Water
Analysis Batch: 687530

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	50.0	43.38		ug/L		87	68 - 130
1,1,1,2-Tetrachloroethane	50.0	46.43		ug/L		93	70 - 131
1,1,2-Trichloroethane	50.0	48.10		ug/L		96	70 - 130
1,1-Dichloroethane	50.0	47.42		ug/L		95	70 - 130
1,1-Dichloroethane	50.0	53.78		ug/L		108	63 - 134
1,1-Dichloropropene	50.0	48.23		ug/L		96	70 - 130
1,2,3-Trichlorobenzene	50.0	59.17		ug/L		118	60 - 138
1,2,3-Trichloropropane	50.0	45.23		ug/L		90	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	50.59		ug/L		101	54 - 135
1,2-Dichlorobenzene	50.0	51.91		ug/L		104	67 - 130

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 400-687530/1002

Matrix: Water

Analysis Batch: 687530

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec Limits
	Added	Result	Qualifier				
1,2-Dichloroethane	50.0	40.74		ug/L		81	69 - 130
1,2-Dichloropropane	50.0	50.64		ug/L		101	70 - 130
1,3,5-Trimethylbenzene	50.0	51.90		ug/L		104	69 - 130
1,3-Dichlorobenzene	50.0	52.62		ug/L		105	70 - 130
1,3-Dichloropropane	50.0	47.05		ug/L		94	70 - 130
1,4-Dichlorobenzene	50.0	51.98		ug/L		104	70 - 130
2,2-Dichloropropane	50.0	42.79		ug/L		86	52 - 135
2-Chlorotoluene	50.0	50.68		ug/L		101	70 - 130
2-Hexanone	200	239.7		ug/L		120	65 - 137
4-Chlorotoluene	50.0	50.91		ug/L		102	70 - 130
Acetone	200	375.2	*+	ug/L		188	43 - 150
Benzene	50.0	47.96		ug/L		96	70 - 130
Bromobenzene	50.0	50.40		ug/L		101	70 - 132
Bromoform	50.0	45.73		ug/L		91	57 - 140
Bromomethane	20.0	17.71		ug/L		89	10 - 150
Carbon disulfide	50.0	49.87		ug/L		100	61 - 137
Carbon tetrachloride	50.0	44.79		ug/L		90	61 - 137
Chlorobenzene	50.0	48.89		ug/L		98	70 - 130
Chlorobromomethane	50.0	49.85		ug/L		100	70 - 130
Chlorodibromomethane	50.0	44.91		ug/L		90	67 - 135
Chloroethane	20.0	13.73		ug/L		69	55 - 141
Chloroform	50.0	44.46		ug/L		89	69 - 130
Chloromethane	20.0	16.32		ug/L		82	58 - 137
cis-1,2-Dichloroethene	50.0	46.99		ug/L		94	68 - 130
cis-1,3-Dichloropropene	50.0	47.30		ug/L		95	69 - 132
Dibromomethane	50.0	47.88		ug/L		96	70 - 130
Dichlorobromomethane	50.0	43.56		ug/L		87	67 - 133
Ethylbenzene	50.0	49.09		ug/L		98	70 - 130
Ethylene Dibromide	50.0	47.95		ug/L		96	70 - 130
Hexachlorobutadiene	50.0	63.94		ug/L		128	53 - 140
Hexane	50.0	44.90		ug/L		90	69 - 130
Iodomethane	50.0	42.39		ug/L		85	27 - 150
Isopropyl ether	50.0	41.05		ug/L		82	64 - 132
Isopropylbenzene	50.0	45.84		ug/L		92	70 - 130
Methyl tert-butyl ether	50.0	47.10		ug/L		94	66 - 130
Methylene Chloride	50.0	53.48		ug/L		107	66 - 135
2-Butanone (MEK)	200	359.6	*+	ug/L		180	61 - 145
4-Methyl-2-pentanone (MIBK)	200	175.9		ug/L		88	69 - 138
m-Xylene & p-Xylene	50.0	48.35		ug/L		97	70 - 130
n-Butylbenzene	50.0	53.39		ug/L		107	67 - 130
N-Propylbenzene	50.0	51.30		ug/L		103	70 - 130
Naphthalene	50.0	52.56		ug/L		105	47 - 149
o-Xylene	50.0	48.34		ug/L		97	70 - 130
sec-Butylbenzene	50.0	53.00		ug/L		106	66 - 130
Styrene	50.0	49.41		ug/L		99	70 - 130
tert-Butylbenzene	50.0	49.61		ug/L		99	64 - 139
Tetrachloroethene	50.0	42.69		ug/L		85	65 - 130
Toluene	50.0	50.28		ug/L		101	70 - 130
trans-1,2-Dichloroethene	50.0	50.59		ug/L		101	70 - 130

Eurofins Raleigh

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 400-687530/1002

Matrix: Water

Analysis Batch: 687530

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,3-Dichloropropene	50.0	44.36		ug/L		89	63 - 130
Trichloroethene	50.0	49.48		ug/L		99	70 - 130
Trichlorofluoromethane	20.0	18.32		ug/L		92	65 - 138
Vinyl acetate	40.0	41.23		ug/L		103	26 - 150
Vinyl chloride	20.0	17.29		ug/L		86	59 - 136
Xylenes, Total	100	96.69		ug/L		97	70 - 130
trans-1,4-Dichloro-2-butene	50.0	37.20		ug/L		74	57 - 140
4-Isopropyltoluene	50.0	55.27		ug/L		111	65 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	51.45		ug/L		103	60 - 139
1,2,4-Trimethylbenzene	50.0	53.70		ug/L		107	70 - 130
1,2,4-Trichlorobenzene	50.0	60.07		ug/L		120	60 - 140
n-Heptane	50.0	43.38		ug/L		87	70 - 130
Ethyl acetate	100	93.07		ug/L		93	34 - 150

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	100		72 - 130
Dibromofluoromethane	96		75 - 126
Toluene-d8 (Surr)	101		64 - 132
1,2-Dichloroethane-d4 (Surr)	83		67 - 134

Lab Sample ID: 752-24759-1 MS

Matrix: Water

Analysis Batch: 687530

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	ND		50.0	40.32		ug/L		81	59 - 137
1,1,1-Trichloroethane	ND		50.0	40.59		ug/L		81	57 - 142
1,1,1,2,2-Tetrachloroethane	ND		50.0	39.87		ug/L		80	66 - 135
1,1,2-Trichloroethane	ND		50.0	40.51		ug/L		81	66 - 131
1,1-Dichloroethane	0.990	J	50.0	44.44		ug/L		87	61 - 144
1,1-Dichloroethene	ND		50.0	48.72		ug/L		97	54 - 147
1,1-Dichloropropene	ND		50.0	44.05		ug/L		88	65 - 136
1,2,3-Trichlorobenzene	ND		50.0	49.26		ug/L		99	43 - 145
1,2,3-Trichloropropane	ND		50.0	38.31		ug/L		77	65 - 133
1,2-Dibromo-3-Chloropropane	ND		50.0	37.44		ug/L		75	45 - 135
1,2-Dichlorobenzene	ND		50.0	45.82		ug/L		92	52 - 137
1,2-Dichloroethane	ND		50.0	38.74		ug/L		77	60 - 141
1,2-Dichloropropane	ND		50.0	45.83		ug/L		92	66 - 137
1,3,5-Trimethylbenzene	ND		50.0	47.27		ug/L		95	52 - 135
1,3-Dichlorobenzene	ND		50.0	45.20		ug/L		90	54 - 135
1,3-Dichloropropane	ND		50.0	40.58		ug/L		81	66 - 133
1,4-Dichlorobenzene	4.66		50.0	49.42		ug/L		90	53 - 135
2,2-Dichloropropane	ND		50.0	40.02		ug/L		80	42 - 144
2-Chlorotoluene	ND		50.0	44.66		ug/L		89	53 - 134
2-Hexanone	ND	F1	200	118.1	F1	ug/L		59	65 - 140
4-Chlorotoluene	ND		50.0	42.94		ug/L		86	54 - 133
Acetone	ND	*+	200	105.4		ug/L		53	43 - 150
Benzene	2.69		50.0	46.13		ug/L		87	56 - 142

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 752-24759-1 MS

Client Sample ID: MW-1

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 687530

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Bromobenzene	ND		50.0	44.30		ug/L		89	59 - 136
Bromoform	ND		50.0	35.33		ug/L		71	50 - 140
Bromomethane	ND		20.0	13.15		ug/L		66	10 - 150
Carbon disulfide	ND		50.0	45.41		ug/L		91	48 - 150
Carbon tetrachloride	ND		50.0	41.22		ug/L		82	55 - 145
Chlorobenzene	2.56		50.0	46.38		ug/L		88	64 - 130
Chlorobromomethane	ND		50.0	44.99		ug/L		90	64 - 140
Chlorodibromomethane	ND		50.0	38.04		ug/L		76	56 - 143
Chloroethane	ND		20.0	14.58		ug/L		73	50 - 150
Chloroform	ND		50.0	41.00		ug/L		82	60 - 141
Chloromethane	ND		20.0	15.47		ug/L		77	49 - 148
cis-1,2-Dichloroethene	ND		50.0	43.93		ug/L		88	59 - 143
cis-1,3-Dichloropropene	ND		50.0	43.06		ug/L		86	57 - 140
Dibromomethane	ND		50.0	42.00		ug/L		84	63 - 138
Dichlorobromomethane	ND		50.0	39.99		ug/L		80	59 - 143
Ethylbenzene	ND		50.0	43.46		ug/L		87	58 - 131
Ethylene Dibromide	ND		50.0	41.17		ug/L		82	64 - 132
Hexachlorobutadiene	ND		50.0	51.83		ug/L		104	31 - 149
Hexane	ND		50.0	40.81		ug/L		82	60 - 142
Iodomethane	ND		50.0	44.96		ug/L		90	20 - 150
Isopropyl ether	ND		50.0	33.30		ug/L		67	60 - 144
Isopropylbenzene	ND		50.0	40.44		ug/L		81	56 - 133
Methyl tert-butyl ether	ND		50.0	41.77		ug/L		84	59 - 137
Methylene Chloride	ND		50.0	50.14		ug/L		100	60 - 146
2-Butanone (MEK)	ND	*+	200	150.5		ug/L		75	55 - 150
4-Methyl-2-pentanone (MIBK)	ND		200	135.5		ug/L		68	63 - 146
m-Xylene & p-Xylene	ND		50.0	43.62		ug/L		87	57 - 130
n-Butylbenzene	ND		50.0	45.87		ug/L		92	41 - 142
N-Propylbenzene	ND		50.0	45.95		ug/L		92	51 - 138
Naphthalene	ND		50.0	42.87		ug/L		86	25 - 150
o-Xylene	ND		50.0	42.89		ug/L		86	61 - 130
sec-Butylbenzene	ND		50.0	46.94		ug/L		94	50 - 138
Styrene	ND		50.0	43.23		ug/L		86	58 - 131
tert-Butylbenzene	ND		50.0	44.96		ug/L		90	54 - 146
Tetrachloroethene	ND		50.0	36.57		ug/L		73	52 - 133
Toluene	ND		50.0	42.92		ug/L		86	65 - 130
trans-1,2-Dichloroethene	ND		50.0	46.76		ug/L		94	61 - 143
trans-1,3-Dichloropropene	ND		50.0	37.54		ug/L		75	53 - 133
Trichloroethene	ND		50.0	43.71		ug/L		87	64 - 136
Trichlorofluoromethane	ND		20.0	17.44		ug/L		87	54 - 150
Vinyl acetate	ND		40.0	35.65		ug/L		89	26 - 150
Vinyl chloride	ND		20.0	15.76		ug/L		79	46 - 150
Xylenes, Total	ND		100	86.51		ug/L		87	59 - 130
trans-1,4-Dichloro-2-butene	ND		50.0	30.22		ug/L		60	43 - 147
4-Isopropyltoluene	62.0		50.0	109.2		ug/L		94	48 - 139
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50.0	46.30		ug/L		93	55 - 150
1,2,4-Trimethylbenzene	ND		50.0	47.57		ug/L		95	50 - 139
1,2,4-Trichlorobenzene	ND		50.0	49.74		ug/L		99	39 - 148

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 752-24759-1 MS

Client Sample ID: MW-1

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 687530

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
n-Heptane	ND		50.0	40.67		ug/L		81	64 - 142	
Ethyl acetate	ND		100	70.78		ug/L		71	34 - 150	
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene	102		72 - 130							
Dibromofluoromethane	98		75 - 126							
Toluene-d8 (Surr)	97		64 - 132							
1,2-Dichloroethane-d4 (Surr)	83		67 - 134							

Lab Sample ID: 752-24759-1 MSD

Client Sample ID: MW-1

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 687530

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		50.0	43.76		ug/L		88	59 - 137	8	30	
1,1,1-Trichloroethane	ND		50.0	42.66		ug/L		85	57 - 142	5	30	
1,1,2,2-Tetrachloroethane	ND		50.0	44.34		ug/L		89	66 - 135	11	30	
1,1,2-Trichloroethane	ND		50.0	44.88		ug/L		90	66 - 131	10	30	
1,1-Dichloroethane	0.990	J	50.0	46.19		ug/L		90	61 - 144	4	30	
1,1-Dichloroethene	ND		50.0	49.04		ug/L		98	54 - 147	1	30	
1,1-Dichloropropene	ND		50.0	47.83		ug/L		96	65 - 136	8	30	
1,2,3-Trichlorobenzene	ND		50.0	51.64		ug/L		103	43 - 145	5	30	
1,2,3-Trichloropropane	ND		50.0	44.13		ug/L		88	65 - 133	14	30	
1,2-Dibromo-3-Chloropropane	ND		50.0	45.76		ug/L		92	45 - 135	20	30	
1,2-Dichlorobenzene	ND		50.0	47.08		ug/L		94	52 - 137	3	30	
1,2-Dichloroethane	ND		50.0	42.99		ug/L		86	60 - 141	10	30	
1,2-Dichloropropane	ND		50.0	50.34		ug/L		101	66 - 137	9	30	
1,3,5-Trimethylbenzene	ND		50.0	46.54		ug/L		93	52 - 135	2	30	
1,3-Dichlorobenzene	ND		50.0	45.44		ug/L		91	54 - 135	1	30	
1,3-Dichloropropane	ND		50.0	45.85		ug/L		92	66 - 133	12	30	
1,4-Dichlorobenzene	4.66		50.0	50.35		ug/L		91	53 - 135	2	30	
2,2-Dichloropropane	ND		50.0	41.93		ug/L		84	42 - 144	5	31	
2-Chlorotoluene	ND		50.0	45.70		ug/L		91	53 - 134	2	30	
2-Hexanone	ND	F1	200	151.9		ug/L		76	65 - 140	25	30	
4-Chlorotoluene	ND		50.0	42.92		ug/L		86	54 - 133	0	30	
Acetone	ND	*+	200	140.3		ug/L		70	43 - 150	28	30	
Benzene	2.69		50.0	48.82		ug/L		92	56 - 142	6	30	
Bromobenzene	ND		50.0	44.10		ug/L		88	59 - 136	0	30	
Bromoform	ND		50.0	41.68		ug/L		83	50 - 140	17	30	
Bromomethane	ND		20.0	8.844		ug/L		44	10 - 150	39	50	
Carbon disulfide	ND		50.0	46.18		ug/L		92	48 - 150	2	30	
Carbon tetrachloride	ND		50.0	43.56		ug/L		87	55 - 145	6	30	
Chlorobenzene	2.56		50.0	47.63		ug/L		90	64 - 130	3	30	
Chlorobromomethane	ND		50.0	48.24		ug/L		96	64 - 140	7	30	
Chlorodibromomethane	ND		50.0	41.83		ug/L		84	56 - 143	10	30	
Chloroethane	ND		20.0	12.26		ug/L		61	50 - 150	17	30	
Chloroform	ND		50.0	43.59		ug/L		87	60 - 141	6	30	
Chloromethane	ND		20.0	18.27		ug/L		91	49 - 148	17	31	

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 752-24759-1 MSD

Client Sample ID: MW-1

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 687530

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
cis-1,2-Dichloroethene	ND		50.0	47.06		ug/L		94	59 - 143	7	30
cis-1,3-Dichloropropene	ND		50.0	48.00		ug/L		96	57 - 140	11	30
Dibromomethane	ND		50.0	48.16		ug/L		96	63 - 138	14	30
Dichlorobromomethane	ND		50.0	43.32		ug/L		87	59 - 143	8	30
Ethylbenzene	ND		50.0	44.66		ug/L		89	58 - 131	3	30
Ethylene Dibromide	ND		50.0	46.56		ug/L		93	64 - 132	12	30
Hexachlorobutadiene	ND		50.0	53.50		ug/L		107	31 - 149	3	36
Hexane	ND		50.0	43.89		ug/L		88	60 - 142	7	30
Iodomethane	ND		50.0	49.05		ug/L		98	20 - 150	9	44
Isopropyl ether	ND		50.0	41.35		ug/L		83	60 - 144	22	30
Isopropylbenzene	ND		50.0	42.44		ug/L		85	56 - 133	5	30
Methyl tert-butyl ether	ND		50.0	48.16		ug/L		96	59 - 137	14	30
Methylene Chloride	ND		50.0	51.35		ug/L		103	60 - 146	2	32
2-Butanone (MEK)	ND	+	200	204.4		ug/L		102	55 - 150	30	30
4-Methyl-2-pentanone (MIBK)	ND		200	175.9		ug/L		88	63 - 146	26	30
m-Xylene & p-Xylene	ND		50.0	44.80		ug/L		90	57 - 130	3	30
n-Butylbenzene	ND		50.0	47.50		ug/L		95	41 - 142	3	31
N-Propylbenzene	ND		50.0	45.49		ug/L		91	51 - 138	1	30
Naphthalene	ND		50.0	49.19		ug/L		98	25 - 150	14	30
o-Xylene	ND		50.0	44.23		ug/L		88	61 - 130	3	30
sec-Butylbenzene	ND		50.0	48.11		ug/L		96	50 - 138	2	30
Styrene	ND		50.0	45.73		ug/L		91	58 - 131	6	30
tert-Butylbenzene	ND		50.0	44.92		ug/L		90	54 - 146	0	30
Tetrachloroethene	ND		50.0	38.21		ug/L		76	52 - 133	4	30
Toluene	ND		50.0	43.70		ug/L		87	65 - 130	2	30
trans-1,2-Dichloroethene	ND		50.0	48.20		ug/L		96	61 - 143	3	30
trans-1,3-Dichloropropene	ND		50.0	41.65		ug/L		83	53 - 133	10	30
Trichloroethene	ND		50.0	47.89		ug/L		96	64 - 136	9	30
Trichlorofluoromethane	ND		20.0	18.89		ug/L		94	54 - 150	8	30
Vinyl acetate	ND		40.0	49.93		ug/L		125	26 - 150	33	33
Vinyl chloride	ND		20.0	19.28		ug/L		96	46 - 150	20	30
Xylenes, Total	ND		100	89.03		ug/L		89	59 - 130	3	30
trans-1,4-Dichloro-2-butene	ND		50.0	35.17		ug/L		70	43 - 147	15	36
4-Isopropyltoluene	62.0		50.0	105.2		ug/L		86	48 - 139	4	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50.0	47.13		ug/L		94	55 - 150	2	30
1,2,4-Trimethylbenzene	ND		50.0	47.47		ug/L		95	50 - 139	0	30
1,2,4-Trichlorobenzene	ND		50.0	50.98		ug/L		102	39 - 148	2	30
n-Heptane	ND		50.0	42.25		ug/L		84	64 - 142	4	30
Ethyl acetate	ND		100	91.61		ug/L		92	34 - 150	26	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene	98		72 - 130
Dibromofluoromethane	98		75 - 126
Toluene-d8 (Surr)	93		64 - 132
1,2-Dichloroethane-d4 (Surr)	89		67 - 134

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 400-687694/4
Matrix: Water
Analysis Batch: 687694

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acetone	ND		25.0	10.0	ug/L			10/12/24 08:12	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			10/12/24 08:12	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene	98		72 - 130				10/12/24 08:12	1	
Dibromofluoromethane	99		75 - 126				10/12/24 08:12	1	
Toluene-d8 (Surr)	94		64 - 132				10/12/24 08:12	1	
1,2-Dichloroethane-d4 (Surr)	103		67 - 134				10/12/24 08:12	1	

Lab Sample ID: LCS 400-687694/1002
Matrix: Water
Analysis Batch: 687694

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Acetone	200	158.8		ug/L		79	43 - 150
2-Butanone (MEK)	200	154.5		ug/L		77	61 - 145
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene	103		72 - 130				
Dibromofluoromethane	98		75 - 126				
Toluene-d8 (Surr)	97		64 - 132				
1,2-Dichloroethane-d4 (Surr)	105		67 - 134				

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-687183/1-A
Matrix: Water
Analysis Batch: 687425

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 687183

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1'-Biphenyl	ND		10.0	3.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4,5-Trichlorophenol	ND		10.0	4.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4,6-Trichlorophenol	ND		10.0	3.50	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4-Dichlorophenol	ND		10.0	4.30	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4-Dimethylphenol	ND		10.0	5.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4-Dinitrophenol	ND		30.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,4-Dinitrotoluene	ND		10.0	5.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Chlorophenol	ND		10.0	4.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Chloronaphthalene	ND		10.0	3.80	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Methylnaphthalene	ND		10.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Methylphenol	ND		10.0	3.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Nitroaniline	ND		10.0	5.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
2-Nitrophenol	ND		10.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
3 & 4 Methylphenol	ND		20.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
3,3'-Dichlorobenzidine	ND		11.0	11.0	ug/L		10/08/24 15:05	10/10/24 18:37	1
3-Nitroaniline	ND		10.0	4.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
4,6-Dinitro-2-methylphenol	ND		10.0	10.0	ug/L		10/08/24 15:05	10/10/24 18:37	1
4-Bromophenyl phenyl ether	ND		10.0	8.60	ug/L		10/08/24 15:05	10/10/24 18:37	1

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-687183/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 687425

Prep Batch: 687183

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4-Chloro-3-methylphenol	ND		10.0	5.30	ug/L		10/08/24 15:05	10/10/24 18:37	1
4-Chloroaniline	ND		10.0	4.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
4-Chlorophenyl phenyl ether	ND		10.0	3.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
4-Nitroaniline	ND		10.0	4.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
Acenaphthene	ND		10.0	4.40	ug/L		10/08/24 15:05	10/10/24 18:37	1
Acenaphthylene	ND		10.0	4.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
Acetophenone	ND		10.0	5.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
Anthracene	ND		10.0	3.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzo[a]anthracene	ND		10.0	6.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzo[a]pyrene	ND		10.0	2.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzo[b]fluoranthene	ND		10.0	5.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzo[g,h,i]perylene	ND		10.0	3.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzo[k]fluoranthene	ND		10.0	3.30	ug/L		10/08/24 15:05	10/10/24 18:37	1
Bis(2-chloroethoxy)methane	ND		10.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
Bis(2-chloroethyl)ether	ND		10.0	3.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Bis(2-ethylhexyl) phthalate	ND		10.0	8.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Chrysene	ND		10.0	6.40	ug/L		10/08/24 15:05	10/10/24 18:37	1
Dibenz(a,h)anthracene	ND		10.0	2.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
Dibenzofuran	ND		10.0	4.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
Di-n-butyl phthalate	ND		10.0	4.60	ug/L		10/08/24 15:05	10/10/24 18:37	1
Diethyl phthalate	ND		10.0	4.40	ug/L		10/08/24 15:05	10/10/24 18:37	1
Dimethyl phthalate	ND		10.0	4.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
Di-n-octyl phthalate	ND		10.0	6.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
Fluoranthene	ND		10.0	4.10	ug/L		10/08/24 15:05	10/10/24 18:37	1
Fluorene	ND		10.0	4.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
Hexachlorobenzene	ND		10.0	9.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
Hexachlorobutadiene	ND		10.0	3.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
Hexachlorocyclopentadiene	ND		20.0	4.50	ug/L		10/08/24 15:05	10/10/24 18:37	1
Hexachloroethane	ND		10.0	5.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
Indeno[1,2,3-cd]pyrene	ND		10.0	2.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Isophorone	ND		10.0	5.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
Naphthalene	ND		10.0	4.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
Nitrobenzene	ND		10.0	4.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
N-Nitrosodiphenylamine	ND		10.0	3.70	ug/L		10/08/24 15:05	10/10/24 18:37	1
N-Nitrosodi-n-propylamine	ND		10.0	2.50	ug/L		10/08/24 15:05	10/10/24 18:37	1
Pentachlorophenol	ND		20.0	11.9	ug/L		10/08/24 15:05	10/10/24 18:37	1
Phenanthrene	ND		10.0	2.80	ug/L		10/08/24 15:05	10/10/24 18:37	1
Phenol	ND		10.0	4.20	ug/L		10/08/24 15:05	10/10/24 18:37	1
Pyrene	ND		10.0	3.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
Butyl benzyl phthalate	ND		10.0	5.80	ug/L		10/08/24 15:05	10/10/24 18:37	1
bis (2-chloroisopropyl) ether	ND		10.0	1.80	ug/L		10/08/24 15:05	10/10/24 18:37	1
Carbazole	ND		10.0	5.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
2,6-Dinitrotoluene	ND		10.0	3.90	ug/L		10/08/24 15:05	10/10/24 18:37	1
4-Nitrophenol	ND		10.0	3.30	ug/L		10/08/24 15:05	10/10/24 18:37	1
Atrazine	ND		10.0	5.00	ug/L		10/08/24 15:05	10/10/24 18:37	1
Benzaldehyde	ND		10.0	2.30	ug/L		10/08/24 15:05	10/10/24 18:37	1
Caprolactam	ND		10.0	2.40	ug/L		10/08/24 15:05	10/10/24 18:37	1

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-687183/1-A

Matrix: Water

Analysis Batch: 687425

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 687183

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	81		10 - 150	10/08/24 15:05	10/10/24 18:37	1
2-Fluorobiphenyl (Surr)	58		21 - 114	10/08/24 15:05	10/10/24 18:37	1
2-Fluorophenol (Surr)	48		10 - 105	10/08/24 15:05	10/10/24 18:37	1
Terphenyl-d14 (Surr)	88		13 - 150	10/08/24 15:05	10/10/24 18:37	1
Phenol-d5 (Surr)	34		10 - 129	10/08/24 15:05	10/10/24 18:37	1
Nitrobenzene-d5 (Surr)	65		16 - 127	10/08/24 15:05	10/10/24 18:37	1

Lab Sample ID: LCS 400-687183/2-A

Matrix: Water

Analysis Batch: 687425

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 687183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-Trichlorophenol	120	84.95		ug/L		71	30 - 144
2,4,6-Trichlorophenol	120	79.78		ug/L		66	27 - 147
2,4-Dichlorophenol	120	80.16		ug/L		67	33 - 132
2,4-Dimethylphenol	120	148.8		ug/L		124	38 - 132
2,4-Dinitrophenol	240	211.6		ug/L		88	15 - 150
2,4-Dinitrotoluene	120	94.37		ug/L		79	35 - 136
2-Chlorophenol	120	80.05		ug/L		67	27 - 124
2-Chloronaphthalene	120	76.03		ug/L		63	24 - 132
2-Methylnaphthalene	120	64.74		ug/L		54	28 - 129
2-Methylphenol	120	94.73		ug/L		79	34 - 124
2-Nitroaniline	120	83.45		ug/L		70	24 - 139
2-Nitrophenol	120	80.87		ug/L		67	25 - 148
3 & 4 Methylphenol	120	84.96		ug/L		71	32 - 122
3,3'-Dichlorobenzidine	160	103.3		ug/L		65	10 - 150
3-Nitroaniline	120	61.13		ug/L		51	10 - 128
4,6-Dinitro-2-methylphenol	240	195.3		ug/L		81	14 - 150
4-Bromophenyl phenyl ether	120	88.89		ug/L		74	17 - 150
4-Chloro-3-methylphenol	120	87.62		ug/L		73	37 - 131
4-Chloroaniline	120	58.48		ug/L		49	10 - 124
4-Chlorophenyl phenyl ether	120	89.60		ug/L		75	27 - 147
4-Nitroaniline	120	63.80		ug/L		53	28 - 118
Acenaphthene	120	89.97		ug/L		75	23 - 140
Acenaphthylene	120	91.43		ug/L		76	31 - 133
Acetophenone	120	79.50		ug/L		66	28 - 126
Anthracene	120	94.64		ug/L		79	31 - 146
Benzo[a]anthracene	120	90.38		ug/L		75	25 - 148
Benzo[a]pyrene	120	97.38		ug/L		81	16 - 150
Benzo[b]fluoranthene	120	92.00		ug/L		77	15 - 150
Benzo[g,h,i]perylene	120	102.8		ug/L		86	10 - 150
Benzo[k]fluoranthene	120	97.42		ug/L		81	15 - 150
Bis(2-chloroethoxy)methane	120	83.38		ug/L		69	24 - 125
Bis(2-chloroethyl)ether	120	79.94		ug/L		67	10 - 121
Bis(2-ethylhexyl) phthalate	120	95.03		ug/L		79	16 - 150
Chrysene	120	92.83		ug/L		77	23 - 150
Dibenz(a,h)anthracene	120	94.91		ug/L		79	10 - 150

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-687183/2-A

Matrix: Water

Analysis Batch: 687425

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 687183

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							Limits	
Dibenzofuran	120	87.25		ug/L		73	30 - 135	
Di-n-butyl phthalate	120	95.25		ug/L		79	27 - 150	
Diethyl phthalate	120	95.73		ug/L		80	37 - 145	
Dimethyl phthalate	120	93.43		ug/L		78	32 - 137	
Di-n-octyl phthalate	120	98.77		ug/L		82	26 - 150	
Fluoranthene	120	91.85		ug/L		77	27 - 150	
Fluorene	120	93.72		ug/L		78	29 - 143	
Hexachlorobenzene	120	88.13		ug/L		73	10 - 150	
Hexachlorobutadiene	120	39.79		ug/L		33	10 - 150	
Hexachlorocyclopentadiene	120	116.5		ug/L		97	10 - 124	
Hexachloroethane	120	40.87		ug/L		34	10 - 127	
Indeno[1,2,3-cd]pyrene	120	96.59		ug/L		80	10 - 150	
Isophorone	120	83.03		ug/L		69	28 - 127	
Naphthalene	120	66.99		ug/L		56	24 - 128	
Nitrobenzene	120	75.79		ug/L		63	29 - 120	
N-Nitrosodiphenylamine	119	83.44		ug/L		70	29 - 138	
N-Nitrosodi-n-propylamine	120	83.72		ug/L		70	24 - 142	
Pentachlorophenol	240	170.6		ug/L		71	19 - 150	
Phenanthrene	120	92.27		ug/L		77	30 - 143	
Phenol	120	55.27		ug/L		46	11 - 95	
Pyrene	120	91.57		ug/L		76	21 - 149	
Butyl benzyl phthalate	120	93.86		ug/L		78	21 - 150	
bis (2-chloroisopropyl) ether	120	76.27		ug/L		64	14 - 123	
Carbazole	120	80.71		ug/L		67	37 - 145	
2,6-Dinitrotoluene	120	89.70		ug/L		75	29 - 140	
4-Nitrophenol	240	143.6		ug/L		60	12 - 129	
Atrazine	120	89.87		ug/L		75	10 - 150	
Benzaldehyde	120	65.39		ug/L		54	10 - 150	
Caprolactam	120	32.38		ug/L		27	10 - 143	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	86		10 - 150
2-Fluorobiphenyl (Surr)	68		21 - 114
2-Fluorophenol (Surr)	56		10 - 105
Terphenyl-d14 (Surr)	76		13 - 150
Phenol-d5 (Surr)	47		10 - 129
Nitrobenzene-d5 (Surr)	66		16 - 127

Lab Sample ID: LCSD 400-687183/3-A

Matrix: Water

Analysis Batch: 687425

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 687183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits			
1,1'-Biphenyl	120	86.76		ug/L		72	24 - 130	10	40	
2,4,5-Trichlorophenol	120	93.37		ug/L		78	30 - 144	9	40	
2,4,6-Trichlorophenol	120	86.67		ug/L		72	27 - 147	8	40	
2,4-Dichlorophenol	120	87.94		ug/L		73	33 - 132	9	40	
2,4-Dimethylphenol	120	163.6	*+	ug/L		136	38 - 132	9	40	

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-687183/3-A

Matrix: Water

Analysis Batch: 687425

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 687183

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
2,4-Dinitrophenol	240	262.8		ug/L		110	15 - 150	22	40	
2,4-Dinitrotoluene	120	108.3		ug/L		90	35 - 136	14	40	
2-Chlorophenol	120	85.95		ug/L		72	27 - 124	7	40	
2-Chloronaphthalene	120	84.50		ug/L		70	24 - 132	11	40	
2-Methylnaphthalene	120	74.44		ug/L		62	28 - 129	14	40	
2-Methylphenol	120	102.4		ug/L		85	34 - 124	8	40	
2-Nitroaniline	120	94.43		ug/L		79	24 - 139	12	40	
2-Nitrophenol	120	88.93		ug/L		74	25 - 148	9	40	
3 & 4 Methylphenol	120	90.88		ug/L		76	32 - 122	7	40	
3,3'-Dichlorobenzidine	160	119.1		ug/L		74	10 - 150	14	40	
3-Nitroaniline	120	65.31		ug/L		54	10 - 128	7	40	
4,6-Dinitro-2-methylphenol	240	233.9		ug/L		97	14 - 150	18	40	
4-Bromophenyl phenyl ether	120	99.35		ug/L		83	17 - 150	11	40	
4-Chloro-3-methylphenol	120	95.83		ug/L		80	37 - 131	9	40	
4-Chloroaniline	120	62.79		ug/L		52	10 - 124	7	40	
4-Chlorophenyl phenyl ether	120	100.5		ug/L		84	27 - 147	11	40	
4-Nitroaniline	120	69.31		ug/L		58	28 - 118	8	40	
Acenaphthene	120	99.58		ug/L		83	23 - 140	10	40	
Acenaphthylene	120	102.1		ug/L		85	31 - 133	11	40	
Acetophenone	120	86.90		ug/L		72	28 - 126	9	40	
Anthracene	120	109.3		ug/L		91	31 - 146	14	40	
Benzo[a]anthracene	120	105.7		ug/L		88	25 - 148	16	40	
Benzo[a]pyrene	120	111.7		ug/L		93	16 - 150	14	40	
Benzo[b]fluoranthene	120	109.5		ug/L		91	15 - 150	17	40	
Benzo[g,h,i]perylene	120	108.3		ug/L		90	10 - 150	5	40	
Benzo[k]fluoranthene	120	112.8		ug/L		94	15 - 150	15	40	
Bis(2-chloroethoxy)methane	120	91.34		ug/L		76	24 - 125	9	40	
Bis(2-chloroethyl)ether	120	85.14		ug/L		71	10 - 121	6	40	
Bis(2-ethylhexyl) phthalate	120	106.6		ug/L		89	16 - 150	11	40	
Chrysene	120	109.2		ug/L		91	23 - 150	16	40	
Dibenz(a,h)anthracene	120	101.4		ug/L		85	10 - 150	7	40	
Dibenzofuran	120	97.08		ug/L		81	30 - 135	11	40	
Di-n-butyl phthalate	120	111.0		ug/L		93	27 - 150	15	40	
Diethyl phthalate	120	108.3		ug/L		90	37 - 145	12	40	
Dimethyl phthalate	120	104.9		ug/L		87	32 - 137	12	40	
Di-n-octyl phthalate	120	111.5		ug/L		93	26 - 150	12	40	
Fluoranthene	120	110.6		ug/L		92	27 - 150	19	40	
Fluorene	120	106.0		ug/L		88	29 - 143	12	40	
Hexachlorobenzene	120	102.0		ug/L		85	10 - 150	15	40	
Hexachlorobutadiene	120	51.37		ug/L		43	10 - 150	25	40	
Hexachlorocyclopentadiene	120	138.1		ug/L		115	10 - 124	17	40	
Hexachloroethane	120	52.18		ug/L		43	10 - 127	24	40	
Indeno[1,2,3-cd]pyrene	120	102.2		ug/L		85	10 - 150	6	40	
Isophorone	120	91.37		ug/L		76	28 - 127	10	40	
Naphthalene	120	81.16		ug/L		68	24 - 128	19	40	
Nitrobenzene	120	85.03		ug/L		71	29 - 120	11	40	
N-Nitrosodiphenylamine	119	93.70		ug/L		79	29 - 138	12	40	
N-Nitrosodi-n-propylamine	120	92.61		ug/L		77	24 - 142	10	40	
Pentachlorophenol	240	205.1		ug/L		85	19 - 150	18	40	

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QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 400-687183/3-A
Matrix: Water
Analysis Batch: 687425

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 687183

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
Phenanthrene	120	106.4		ug/L		89	30 - 143	14	40	
Phenol	120	58.62		ug/L		49	11 - 95	6	40	
Pyrene	120	104.9		ug/L		87	21 - 149	14	40	
Butyl benzyl phthalate	120	105.2		ug/L		88	21 - 150	11	40	
bis (2-chloroisopropyl) ether	120	84.48		ug/L		70	14 - 123	10	40	
Carbazole	120	95.27		ug/L		79	37 - 145	17	40	
2,6-Dinitrotoluene	120	101.1		ug/L		84	29 - 140	12	40	
4-Nitrophenol	240	168.6		ug/L		70	12 - 129	16	40	
Atrazine	120	103.4		ug/L		86	10 - 150	14	40	
Benzaldehyde	120	71.13		ug/L		59	10 - 150	8	40	
Caprolactam	120	34.22		ug/L		29	10 - 143	6	40	

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	92		10 - 150
2-Fluorobiphenyl (Surr)	73		21 - 114
2-Fluorophenol (Surr)	59		10 - 105
Terphenyl-d14 (Surr)	83		13 - 150
Phenol-d5 (Surr)	48		10 - 129
Nitrobenzene-d5 (Surr)	73		16 - 127

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 400-687179/1-A
Matrix: Water
Analysis Batch: 687370

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 687179

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		0.300	0.300	ug/L		10/08/24 15:01	10/09/24 18:34	1
Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac			
	%Recovery	Qualifier							
1,4-Dioxane-d8	29		10 - 140	10/08/24 15:01	10/09/24 18:34	1			

Lab Sample ID: LCS 400-687179/2-A
Matrix: Water
Analysis Batch: 687370

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 687179

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
1,4-Dioxane	16.0	18.51		ug/L		116	30 - 150			
Isotope Dilution	LCS	LCS	Limits							
	%Recovery	Qualifier								
1,4-Dioxane-d8	21		10 - 140							

Lab Sample ID: LCSD 400-687179/3-A
Matrix: Water
Analysis Batch: 687370

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 687179

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec		RPD	Limit
		Result	Qualifier				Limits	RPD		
1,4-Dioxane	16.0	18.25		ug/L		114	30 - 150	1		

Eurofins Raleigh

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

Isotope Dilution	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1,4-Dioxane-d8	31		10 - 140

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 400-687138/15
Matrix: Water
Analysis Batch: 687138

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.00	0.390	mg/L			10/08/24 14:32	1

Lab Sample ID: LCS 400-687138/16
Matrix: Water
Analysis Batch: 687138

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Sulfate	10.0	9.678		mg/L		97	90 - 110		

Lab Sample ID: LCSD 400-687138/17
Matrix: Water
Analysis Batch: 687138

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Sulfate	10.0	10.46		mg/L		105	90 - 110	8	15

Lab Sample ID: MB 400-687142/46
Matrix: Water
Analysis Batch: 687142

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Sulfate	ND		1.00	0.390	mg/L			10/08/24 18:59	1

Lab Sample ID: LCS 400-687142/47
Matrix: Water
Analysis Batch: 687142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Sulfate	10.0	10.15		mg/L		101	90 - 110		

Lab Sample ID: LCSD 400-687142/48
Matrix: Water
Analysis Batch: 687142

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec Limits	RPD	Limit
		Result	Qualifier						
Sulfate	10.0	10.09		mg/L		101	90 - 110	1	15

Lab Sample ID: 752-24759-8 MS
Matrix: Water
Analysis Batch: 687142

Client Sample ID: MW-9
Prep Type: Total/NA

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Sulfate	3.45		10.0	11.85		mg/L		84	80 - 120		

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: 752-24759-8 MSD
Matrix: Water
Analysis Batch: 687142

Client Sample ID: MW-9
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	3.45		10.0	14.20		mg/L		108	80 - 120	18	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 705-15490/1-A
Matrix: Water
Analysis Batch: 16109

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 15490

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	2.45	ug/L		10/07/24 12:39	10/09/24 21:53	1
Arsenic	ND		5.00	1.32	ug/L		10/07/24 12:39	10/09/24 21:53	1
Barium	ND		10.0	0.410	ug/L		10/07/24 12:39	10/09/24 21:53	1
Beryllium	ND		1.00	0.147	ug/L		10/07/24 12:39	10/09/24 21:53	1
Cadmium	ND		0.700	0.237	ug/L		10/07/24 12:39	10/09/24 21:53	1
Chromium	ND		5.00	3.69	ug/L		10/07/24 12:39	10/09/24 21:53	1
Cobalt	ND		5.00	0.411	ug/L		10/07/24 12:39	10/09/24 21:53	1
Copper	ND		2.00	0.642	ug/L		10/07/24 12:39	10/09/24 21:53	1
Lead	ND		1.00	0.864	ug/L		10/07/24 12:39	10/09/24 21:53	1
Manganese	ND		5.00	1.29	ug/L		10/07/24 12:39	10/09/24 21:53	1
Nickel	ND		5.00	0.422	ug/L		10/07/24 12:39	10/09/24 21:53	1
Selenium	ND		5.00	2.29	ug/L		10/07/24 12:39	10/09/24 21:53	1
Silver	ND		1.00	0.167	ug/L		10/07/24 12:39	10/09/24 21:53	1
Thallium	ND		1.00	0.190	ug/L		10/07/24 12:39	10/09/24 21:53	1
Vanadium	ND		5.00	1.22	ug/L		10/07/24 12:39	10/09/24 21:53	1
Zinc	ND		10.0	8.91	ug/L		10/07/24 12:39	10/09/24 21:53	1

Lab Sample ID: LCS 705-15490/2-A
Matrix: Water
Analysis Batch: 16109

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 15490

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	103.9		ug/L		104	80 - 120
Arsenic	100	111.9		ug/L		112	80 - 120
Barium	100	104.7		ug/L		105	80 - 120
Beryllium	100	101.6		ug/L		102	80 - 120
Cadmium	100	104.2		ug/L		104	80 - 120
Chromium	100	115.2		ug/L		115	80 - 120
Cobalt	100	116.3		ug/L		116	80 - 120
Copper	100	116.8		ug/L		117	80 - 120
Lead	100	106.1		ug/L		106	80 - 120
Manganese	100	107.9		ug/L		108	80 - 120
Nickel	100	114.6		ug/L		115	80 - 120
Selenium	100	106.6		ug/L		107	80 - 120
Silver	10.0	10.14		ug/L		101	80 - 120
Thallium	100	105.7		ug/L		106	80 - 120
Vanadium	100	115.8		ug/L		116	80 - 120
Zinc	100	112.2		ug/L		112	80 - 120

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 705-16266/1-A
Matrix: Water
Analysis Batch: 16644

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.166	ug/L		10/10/24 15:51	10/10/24 19:35	1

Lab Sample ID: LCS 705-16266/2-A
Matrix: Water
Analysis Batch: 16644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	4.00	4.422		ug/L		111	80 - 120

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 752-9051/10
Matrix: Water
Analysis Batch: 9051

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.0500	0.0200	mg/L			10/03/24 11:05	1

Lab Sample ID: MB 752-9051/40
Matrix: Water
Analysis Batch: 9051

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.0500	0.0200	mg/L			10/03/24 11:58	1

Lab Sample ID: LCS 752-9051/11
Matrix: Water
Analysis Batch: 9051

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	1.02	0.9919		mg/L		98	90 - 110

Lab Sample ID: LCS 752-9051/41
Matrix: Water
Analysis Batch: 9051

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	1.02	1.007		mg/L		99	90 - 110

Lab Sample ID: 752-24759-2 MS
Matrix: Water
Analysis Batch: 9051

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ammonia (as N)	280		198	483.2		mg/L		103	90 - 110

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 752-24759-2 MSD
Matrix: Water
Analysis Batch: 9051

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	280		198	489.5		mg/L		106	90 - 110	1	30

Lab Sample ID: 752-24759-4 MS
Matrix: Water
Analysis Batch: 9051

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	2.88	F1	3.95	6.026	F1	mg/L		80	90 - 110		

Lab Sample ID: 752-24759-4 MSD
Matrix: Water
Analysis Batch: 9051

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	2.88	F1	3.95	6.029	F1	mg/L		80	90 - 110	0	30

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 752-9055/16
Matrix: Water
Analysis Batch: 9055

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.100	0.0168	mg/L			10/02/24 15:24	1

Lab Sample ID: MB 752-9055/8
Matrix: Water
Analysis Batch: 9055

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.100	0.0168	mg/L			10/02/24 15:16	1

Lab Sample ID: LCS 752-9055/11
Matrix: Water
Analysis Batch: 9055

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	1.00	0.9987		mg/L		100	90 - 110		

Lab Sample ID: LCSD 752-9055/41
Matrix: Water
Analysis Batch: 9055

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	1.00	0.9955		mg/L		100	90 - 110	0	10

QC Sample Results

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 752-9062/46
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0410	mg/L			10/07/24 14:14	1

Lab Sample ID: MB 752-9062/75
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0410	mg/L			10/07/24 15:34	1

Lab Sample ID: MB 752-9062/8
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0410	mg/L			10/07/24 12:18	1

Lab Sample ID: LCS 752-9062/47
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.25	1.197		mg/L		96	90 - 110

Lab Sample ID: LCS 752-9062/76
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.25	1.262		mg/L		101	90 - 110

Lab Sample ID: LCS 752-9062/9
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.25	1.262		mg/L		101	90 - 110

Lab Sample ID: LCSD 752-9062/98
Matrix: Water
Analysis Batch: 9062

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate Nitrite as N	1.25	1.350		mg/L		108	90 - 110	7	10

QC Association Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

GC/MS VOA

Analysis Batch: 687530

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	8260D	
752-24759-2	MW-3	Total/NA	Water	8260D	
752-24759-3	MW-4	Total/NA	Water	8260D	
752-24759-4	MW-5	Total/NA	Water	8260D	
752-24759-5	MW-6	Total/NA	Water	8260D	
752-24759-6	MW-7	Total/NA	Water	8260D	
752-24759-7	MW-8	Total/NA	Water	8260D	
752-24759-8	MW-9	Total/NA	Water	8260D	
752-24759-9	DUP-01	Total/NA	Water	8260D	
752-24759-10	Trip Blank	Total/NA	Water	8260D	
MB 400-687530/5	Method Blank	Total/NA	Water	8260D	
LCS 400-687530/1002	Lab Control Sample	Total/NA	Water	8260D	
752-24759-1 MS	MW-1	Total/NA	Water	8260D	
752-24759-1 MSD	MW-1	Total/NA	Water	8260D	

Analysis Batch: 687694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-3 - DL	MW-4	Total/NA	Water	8260D	
MB 400-687694/4	Method Blank	Total/NA	Water	8260D	
LCS 400-687694/1002	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 687179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	3510C	
752-24759-2	MW-3	Total/NA	Water	3510C	
752-24759-4	MW-5	Total/NA	Water	3510C	
752-24759-5	MW-6	Total/NA	Water	3510C	
752-24759-6	MW-7	Total/NA	Water	3510C	
752-24759-7	MW-8	Total/NA	Water	3510C	
752-24759-8	MW-9	Total/NA	Water	3510C	
752-24759-9	DUP-01	Total/NA	Water	3510C	
MB 400-687179/1-A	Method Blank	Total/NA	Water	3510C	
LCS 400-687179/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 400-687179/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Prep Batch: 687183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	3510C	
752-24759-2	MW-3	Total/NA	Water	3510C	
752-24759-4	MW-5	Total/NA	Water	3510C	
752-24759-5	MW-6	Total/NA	Water	3510C	
752-24759-6	MW-7	Total/NA	Water	3510C	
752-24759-7	MW-8	Total/NA	Water	3510C	
752-24759-8	MW-9	Total/NA	Water	3510C	
752-24759-9	DUP-01	Total/NA	Water	3510C	
MB 400-687183/1-A	Method Blank	Total/NA	Water	3510C	
LCS 400-687183/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 400-687183/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

QC Association Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

GC/MS Semi VOA

Analysis Batch: 687370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	8270E SIM ID	687179
752-24759-2	MW-3	Total/NA	Water	8270E SIM ID	687179
752-24759-4	MW-5	Total/NA	Water	8270E SIM ID	687179
752-24759-5	MW-6	Total/NA	Water	8270E SIM ID	687179
752-24759-6	MW-7	Total/NA	Water	8270E SIM ID	687179
752-24759-7	MW-8	Total/NA	Water	8270E SIM ID	687179
752-24759-8	MW-9	Total/NA	Water	8270E SIM ID	687179
752-24759-9	DUP-01	Total/NA	Water	8270E SIM ID	687179
MB 400-687179/1-A	Method Blank	Total/NA	Water	8270E SIM ID	687179
LCS 400-687179/2-A	Lab Control Sample	Total/NA	Water	8270E SIM ID	687179
LCSD 400-687179/3-A	Lab Control Sample Dup	Total/NA	Water	8270E SIM ID	687179

Analysis Batch: 687425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	8270E	687183
752-24759-2	MW-3	Total/NA	Water	8270E	687183
752-24759-4	MW-5	Total/NA	Water	8270E	687183
752-24759-5	MW-6	Total/NA	Water	8270E	687183
752-24759-6	MW-7	Total/NA	Water	8270E	687183
752-24759-7	MW-8	Total/NA	Water	8270E	687183
752-24759-8	MW-9	Total/NA	Water	8270E	687183
752-24759-9	DUP-01	Total/NA	Water	8270E	687183
MB 400-687183/1-A	Method Blank	Total/NA	Water	8270E	687183
LCS 400-687183/2-A	Lab Control Sample	Total/NA	Water	8270E	687183
LCSD 400-687183/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	687183

HPLC/IC

Analysis Batch: 687138

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	9056A	
752-24759-2	MW-3	Total/NA	Water	9056A	
752-24759-4	MW-5	Total/NA	Water	9056A	
752-24759-5	MW-6	Total/NA	Water	9056A	
752-24759-6	MW-7	Total/NA	Water	9056A	
752-24759-7	MW-8	Total/NA	Water	9056A	
MB 400-687138/15	Method Blank	Total/NA	Water	9056A	
LCS 400-687138/16	Lab Control Sample	Total/NA	Water	9056A	
LCSD 400-687138/17	Lab Control Sample Dup	Total/NA	Water	9056A	

Analysis Batch: 687142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-8	MW-9	Total/NA	Water	9056A	
752-24759-9	DUP-01	Total/NA	Water	9056A	
MB 400-687142/46	Method Blank	Total/NA	Water	9056A	
LCS 400-687142/47	Lab Control Sample	Total/NA	Water	9056A	
LCSD 400-687142/48	Lab Control Sample Dup	Total/NA	Water	9056A	
752-24759-8 MS	MW-9	Total/NA	Water	9056A	
752-24759-8 MSD	MW-9	Total/NA	Water	9056A	

QC Association Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Metals

Prep Batch: 15490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total Recoverable	Water	3005A	
752-24759-2	MW-3	Total Recoverable	Water	3005A	
752-24759-4	MW-5	Total Recoverable	Water	3005A	
752-24759-5	MW-6	Total Recoverable	Water	3005A	
752-24759-6	MW-7	Total Recoverable	Water	3005A	
752-24759-7	MW-8	Total Recoverable	Water	3005A	
752-24759-8	MW-9	Total Recoverable	Water	3005A	
752-24759-9	DUP-01	Total Recoverable	Water	3005A	
MB 705-15490/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 705-15490/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 16109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total Recoverable	Water	6020B	15490
752-24759-2	MW-3	Total Recoverable	Water	6020B	15490
752-24759-4	MW-5	Total Recoverable	Water	6020B	15490
752-24759-5	MW-6	Total Recoverable	Water	6020B	15490
752-24759-6	MW-7	Total Recoverable	Water	6020B	15490
752-24759-7	MW-8	Total Recoverable	Water	6020B	15490
752-24759-8	MW-9	Total Recoverable	Water	6020B	15490
752-24759-9	DUP-01	Total Recoverable	Water	6020B	15490
MB 705-15490/1-A	Method Blank	Total Recoverable	Water	6020B	15490
LCS 705-15490/2-A	Lab Control Sample	Total Recoverable	Water	6020B	15490

Prep Batch: 16266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	7470A	
752-24759-2	MW-3	Total/NA	Water	7470A	
752-24759-4	MW-5	Total/NA	Water	7470A	
752-24759-5	MW-6	Total/NA	Water	7470A	
752-24759-6	MW-7	Total/NA	Water	7470A	
752-24759-7	MW-8	Total/NA	Water	7470A	
752-24759-8	MW-9	Total/NA	Water	7470A	
752-24759-9	DUP-01	Total/NA	Water	7470A	
MB 705-16266/1-A	Method Blank	Total/NA	Water	7470A	
LCS 705-16266/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 16343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-4	MW-5	Total Recoverable	Water	6020B	15490
752-24759-5	MW-6	Total Recoverable	Water	6020B	15490
752-24759-6	MW-7	Total Recoverable	Water	6020B	15490

Analysis Batch: 16644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	7470A	16266
752-24759-2	MW-3	Total/NA	Water	7470A	16266
752-24759-4	MW-5	Total/NA	Water	7470A	16266
752-24759-5	MW-6	Total/NA	Water	7470A	16266
752-24759-6	MW-7	Total/NA	Water	7470A	16266
752-24759-7	MW-8	Total/NA	Water	7470A	16266

Eurofins Raleigh

QC Association Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Metals (Continued)

Analysis Batch: 16644 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-8	MW-9	Total/NA	Water	7470A	16266
752-24759-9	DUP-01	Total/NA	Water	7470A	16266
MB 705-16266/1-A	Method Blank	Total/NA	Water	7470A	16266
LCS 705-16266/2-A	Lab Control Sample	Total/NA	Water	7470A	16266

Analysis Batch: 16756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-5	MW-6	Total Recoverable	Water	6020B	15490
752-24759-7	MW-8	Total Recoverable	Water	6020B	15490

General Chemistry

Analysis Batch: 9051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	350.1	
752-24759-2	MW-3	Total/NA	Water	350.1	
752-24759-4	MW-5	Total/NA	Water	350.1	
752-24759-5	MW-6	Total/NA	Water	350.1	
752-24759-6	MW-7	Total/NA	Water	350.1	
752-24759-7	MW-8	Total/NA	Water	350.1	
752-24759-8	MW-9	Total/NA	Water	350.1	
752-24759-9	DUP-01	Total/NA	Water	350.1	
MB 752-9051/10	Method Blank	Total/NA	Water	350.1	
MB 752-9051/40	Method Blank	Total/NA	Water	350.1	
LCS 752-9051/11	Lab Control Sample	Total/NA	Water	350.1	
LCS 752-9051/41	Lab Control Sample	Total/NA	Water	350.1	
752-24759-2 MS	MW-3	Total/NA	Water	350.1	
752-24759-2 MSD	MW-3	Total/NA	Water	350.1	
752-24759-4 MS	MW-5	Total/NA	Water	350.1	
752-24759-4 MSD	MW-5	Total/NA	Water	350.1	

Analysis Batch: 9055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	353.2	
752-24759-2	MW-3	Total/NA	Water	353.2	
752-24759-4	MW-5	Total/NA	Water	353.2	
752-24759-5	MW-6	Total/NA	Water	353.2	
752-24759-6	MW-7	Total/NA	Water	353.2	
752-24759-7	MW-8	Total/NA	Water	353.2	
752-24759-8	MW-9	Total/NA	Water	353.2	
752-24759-9	DUP-01	Total/NA	Water	353.2	
MB 752-9055/16	Method Blank	Total/NA	Water	353.2	
MB 752-9055/8	Method Blank	Total/NA	Water	353.2	
LCS 752-9055/11	Lab Control Sample	Total/NA	Water	353.2	
LCSD 752-9055/41	Lab Control Sample Dup	Total/NA	Water	353.2	

Analysis Batch: 9062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	353.2	
752-24759-2	MW-3	Total/NA	Water	353.2	
752-24759-4	MW-5	Total/NA	Water	353.2	

QC Association Summary

Client: S&ME Inc
 Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

General Chemistry (Continued)

Analysis Batch: 9062 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-5	MW-6	Total/NA	Water	353.2	
752-24759-6	MW-7	Total/NA	Water	353.2	
752-24759-7	MW-8	Total/NA	Water	353.2	
752-24759-8	MW-9	Total/NA	Water	353.2	
752-24759-9	DUP-01	Total/NA	Water	353.2	
MB 752-9062/46	Method Blank	Total/NA	Water	353.2	
MB 752-9062/75	Method Blank	Total/NA	Water	353.2	
MB 752-9062/8	Method Blank	Total/NA	Water	353.2	
LCS 752-9062/47	Lab Control Sample	Total/NA	Water	353.2	
LCS 752-9062/76	Lab Control Sample	Total/NA	Water	353.2	
LCS 752-9062/9	Lab Control Sample	Total/NA	Water	353.2	
LCSD 752-9062/98	Lab Control Sample Dup	Total/NA	Water	353.2	

Analysis Batch: 9079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-24759-1	MW-1	Total/NA	Water	Nitrate by calc	
752-24759-2	MW-3	Total/NA	Water	Nitrate by calc	
752-24759-4	MW-5	Total/NA	Water	Nitrate by calc	
752-24759-5	MW-6	Total/NA	Water	Nitrate by calc	
752-24759-6	MW-7	Total/NA	Water	Nitrate by calc	
752-24759-7	MW-8	Total/NA	Water	Nitrate by calc	
752-24759-8	MW-9	Total/NA	Water	Nitrate by calc	
752-24759-9	DUP-01	Total/NA	Water	Nitrate by calc	



Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-1

Lab Sample ID: 752-24759-1

Date Collected: 10/01/24 10:55

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 11:53
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 19:50
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 19:39
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 17:34
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 22:21
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:10
Total/NA	Analysis	350.1		51.43	9051	ME	EET RAL	10/03/24 13:22
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:36
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:33
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: MW-3

Lab Sample ID: 752-24759-2

Date Collected: 10/01/24 10:25

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 12:15
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 20:14
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 20:00
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 17:59
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 22:25
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:26
Total/NA	Analysis	350.1		500	9051	ME	EET RAL	10/03/24 14:13
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:39
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:34
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: MW-4

Lab Sample ID: 752-24759-3

Date Collected: 10/01/24 12:00

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 13:43
Total/NA	Analysis	8260D	DL	2	687694	WPD	EET PEN	10/12/24 12:00

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-5
Date Collected: 10/01/24 15:15
Date Received: 10/02/24 08:40

Lab Sample ID: 752-24759-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 14:05
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 20:37
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 20:22
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 18:08
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 22:57
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16343	IF	EET ATL	10/10/24 23:01
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:29
Total/NA	Analysis	350.1		10	9051	ME	EET RAL	10/03/24 14:18
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:40
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:36
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: MW-6
Date Collected: 10/01/24 13:25
Date Received: 10/02/24 08:40

Lab Sample ID: 752-24759-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 14:27
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 21:01
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 20:43
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 18:16
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 23:00
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		2	16343	IF	EET ATL	10/10/24 22:57
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		5	16756	IF	EET ATL	10/14/24 17:31
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:33
Total/NA	Analysis	350.1		51.43	9051	ME	EET RAL	10/03/24 13:35
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:41
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:38
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-7

Lab Sample ID: 752-24759-6

Date Collected: 10/01/24 13:15

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 14:49
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 21:25
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 21:05
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 18:25
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 23:04
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16343	IF	EET ATL	10/10/24 23:05
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:37
Total/NA	Analysis	350.1		51.43	9051	ME	EET RAL	10/03/24 13:36
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:42
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:40
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: MW-8

Lab Sample ID: 752-24759-7

Date Collected: 10/01/24 11:45

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 15:11
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 21:49
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 21:26
Total/NA	Analysis	9056A		1	687138	AMM	EET PEN	10/08/24 18:34
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 23:08
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		10	16756	IF	EET ATL	10/14/24 18:20
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:41
Total/NA	Analysis	350.1		51.43	9051	ME	EET RAL	10/03/24 13:41
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:42
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:42
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Client Sample ID: MW-9

Lab Sample ID: 752-24759-8

Date Collected: 10/01/24 12:25

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 15:33
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 22:13
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 21:48
Total/NA	Analysis	9056A		1	687142	AMM	EET PEN	10/08/24 19:25
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 23:12
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:45
Total/NA	Analysis	350.1		51.43	9051	ME	EET RAL	10/03/24 13:43
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:43
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:44
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: DUP-01

Lab Sample ID: 752-24759-9

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 15:55
Total/NA	Prep	3510C			687183	STC	EET PEN	10/08/24 15:05
Total/NA	Analysis	8270E		1	687425	S1B	EET PEN	10/10/24 22:37
Total/NA	Prep	3510C			687179	STC	EET PEN	10/08/24 15:02
Total/NA	Analysis	8270E SIM ID		1	687370	JAW	EET PEN	10/09/24 22:09
Total/NA	Analysis	9056A		1	687142	AMM	EET PEN	10/08/24 19:50
Total Recoverable	Prep	3005A			15490	BL	EET ATL	10/07/24 12:39
Total Recoverable	Analysis	6020B		1	16109	IF	EET ATL	10/09/24 23:16
Total/NA	Prep	7470A			16266	GR	EET ATL	10/10/24 15:51
Total/NA	Analysis	7470A		1	16644	GR	EET ATL	10/10/24 20:49
Total/NA	Analysis	350.1		500	9051	ME	EET RAL	10/03/24 14:23
Total/NA	Analysis	353.2		1	9055	ME	EET RAL	10/02/24 15:44
Total/NA	Analysis	353.2		1	9062	ME	EET RAL	10/07/24 13:45
Total/NA	Analysis	Nitrate by calc		1	9079	LEB	EET RAL	10/08/24 20:17

Client Sample ID: Trip Blank

Lab Sample ID: 752-24759-10

Date Collected: 10/01/24 00:00

Matrix: Water

Date Received: 10/02/24 08:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	687530	WPD	EET PEN	10/11/24 09:19

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Laboratory References:

EET ATL = Eurofins Atlanta, 3080 Presidential Dr, Atlanta, GA 30340, TEL (770)457-8177
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
EET RAL = Eurofins Raleigh, 104 Woodwinds Industrial Court, Suite A, Cary, NC 27511, TEL (919)467-3090

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Accreditation/Certification Summary

Client: S&ME Inc
 Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Laboratory: Eurofins Raleigh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87610	06-30-25
North Carolina (DW)	State	37724	07-31-25
North Carolina (WW/SW)	State	591	12-31-24
Virginia	NELAP	460146	06-14-25

Laboratory: Eurofins Atlanta

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
AIHA LAP, LLC	Environmental Lead Laboratory Accreditation Program (ELLAP)	LAP-100671	11-01-25
AIHA LAP, LLC	Industrial Hygiene Laboratory Accreditation Program (IHLAP)	LAP-100671	11-01-25
Florida	NELAP	E87582	06-30-25
Georgia	State	E87582	06-30-25
Georgia (DW)	State	800	04-25-26
Kentucky (UST)	State	123046	06-30-25
North Carolina (WW/SW)	State	562	12-31-24
South Carolina	State	98016	06-30-25

Laboratory: Eurofins Pensacola

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
North Carolina (WW/SW)	State	314	12-31-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260D		Water	Ethyl acetate
8260D		Water	Hexane
8260D		Water	n-Heptane
9056A		Water	Sulfate

Method Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET PEN
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET PEN
8270E SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET PEN
9056A	Anions, Ion Chromatography	SW846	EET PEN
6020B	Metals (ICP/MS)	SW846	EET ATL
7470A	Mercury (CVAA)	SW846	EET ATL
350.1	Nitrogen, Ammonia	EPA	EET RAL
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET RAL
353.2	Nitrogen, Nitrite	EPA	EET RAL
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	EET RAL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET ATL
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET PEN
5030C	Purge and Trap	SW846	EET PEN
7470A	Preparation, Mercury	SW846	EET ATL

Protocol References:

- EPA = US Environmental Protection Agency
- SM = "Standard Methods For The Examination Of Water And Wastewater"
- SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

- EET ATL = Eurofins Atlanta, 3080 Presidential Dr, Atlanta, GA 30340, TEL (770)457-8177
- EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001
- EET RAL = Eurofins Raleigh, 104 Woodwinds Industrial Court, Suite A, Cary, NC 27511, TEL (919)467-3090



Sample Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-24759-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
752-24759-1	MW-1	Water	10/01/24 10:55	10/02/24 08:40
752-24759-2	MW-3	Water	10/01/24 10:25	10/02/24 08:40
752-24759-3	MW-4	Water	10/01/24 12:00	10/02/24 08:40
752-24759-4	MW-5	Water	10/01/24 15:15	10/02/24 08:40
752-24759-5	MW-6	Water	10/01/24 13:25	10/02/24 08:40
752-24759-6	MW-7	Water	10/01/24 13:15	10/02/24 08:40
752-24759-7	MW-8	Water	10/01/24 11:45	10/02/24 08:40
752-24759-8	MW-9	Water	10/01/24 12:25	10/02/24 08:40
752-24759-9	DUP-01	Water	10/01/24 00:00	10/02/24 08:40
752-24759-10	Trip Blank	Water	10/01/24 00:00	10/02/24 08:40

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Eurofins Savannah

5102 LaRoche Avenue
Savannah, GA 31404
Phone (912) 354-7858 Phone (912) 352-0165

Chain of Custody Record

Client Information		Sampler: <i>James Waters / Logan Hester</i>		Lab PM: Bechtold, Chad		Carrier Tracking No(s):		COC No: 680-160964-57642.1			
Client Contact: Thomas Raymond		Phone: <i>919-872-2660</i>		E-Mail: Chad.Bechtold@et.eurofinsus.com		State of Origin: <i>NC</i>		Page: Page 1 of 2			
Company: S&ME Inc		PWSID:		Analysis Requested						Job #:	
Address: 3201 Spring Forest Road		Due Date Requested:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Form MS/MSD (Yes or No) <input checked="" type="checkbox"/> 9056A_ORGFM_28D - Sulfate, 9056A_ORGFM_48H - Nitrate 350.1 - Ammonia as N 6020B - PRLF 16 Metals, including prep: 7470A - Hg 8270E - SVOC TCL OLM4.2 8260D - VOC NC 02L List 8270E_SIM_MS_ID - 1,4-Dioxane						Preservation Codes: N - None, S - H2SO4, D - HNO3, A - HCL	
City: Raleigh		TAT Requested (days):								QR Code 752-24759 COC	
State, Zip: NC, 27616		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No									
Phone: 919-872-2660(Tel) 919-876-3958(Fax)		PO #: 23050459									
Email: traymond@smeinc.com <i>jpaud@smeinc.com</i>		WO #:									
Project Name: Cliffdale Landfill		Project #: 68026680		Other:		Special Instructions/Note:					
Site:		SSOW#:		Total Number of containers:							
Sample Identification		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:	
<i>MW-1</i>		<i>10/1/24</i>		<i>1055</i>		<i>G</i>		<i>W</i>			
<i>MW-3</i>				<i>1025</i>							
<i>MW-4</i>				<i>1200</i>							
<i>MW-5</i>				<i>1515</i>							
<i>MW-6</i>				<i>1315</i>							
<i>MW-7</i>				<i>1315</i>							
<i>MW-8</i>				<i>1145</i>							
<i>MW-9</i>				<i>1225</i>							
<i>DUP-01</i>											
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Deliverable Requested: I, II, III, IV, Other (specify)				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by: <i>James A. Waters</i>		Date/Time: <i>10/2/24</i>		Company: <i>S&ME</i>		Received by: <i>Walt Brady</i>		Date/Time: <i>10/2/24 0840</i>		Company: <i>Eurofins</i>	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							

Initial Temperature: *42.4* °C
Correction Factor: *0* °C
Corrected Temperature: *42.4* °C
Temp IR Gun: CRY-T-132
Initials: RY *BR* PG DW GJ LB

Eurofins Raleigh

104 Woodwinds Industrial Court Suite A
 Cary, NC 27511
 Phone: 919-467-3090

Chain of Custody Record



eurofins

Environment Testing

Client Information (Sub Contract Lab)		Sampler:	Lab PM: Bechtold, Chad	Carrier Tracking No(s):	COC No: 752-4017.1			
Client Contact: Shipping/Receiving		Phone:	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 2			
Company: Eurofins Environment Testing Southeast L			Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-24759-1			
Address: 3355 McLemore Drive,		Due Date Requested: 10/10/2024	Analysis Requested					
City: Pensacola		TAT Requested (days):						
State, Zip: FL, 32514		PO #:						
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		WO #:						
Email:		Project #: 68026680						
Project Name: PRLF -special pricing		SSOW#:						
Site:								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code	Other:	Special Instructions/Note:
MW-1 (752-24759-1)	10/1/24	10:55 Eastern	G	Water		X X X		
MW-3 (752-24759-2)	10/1/24	10:25 Eastern	G	Water		X X X		
MW-4 (752-24759-3)	10/1/24	12:00 Eastern	G	Water		X		
MW-5 (752-24759-4)	10/1/24	15:15 Eastern	G	Water		X X X		
MW-6 (752-24759-5)	10/1/24	13:25 Eastern	G	Water		X X X		
MW-7 (752-24759-6)	10/1/24	13:15 Eastern	G	Water		X X X		
MW-8 (752-24759-7)	10/1/24	11:45 Eastern	G	Water		X X X		
MW-9 (752-24759-8)	10/1/24	12:25 Eastern	G	Water		X X X		
DUP-01 (752-24759-9)	10/1/24	Eastern	G	Water		X X X		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.</p>								
Possible Hazard Identification					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:		
Relinquished by: <i>[Signature]</i>		Date/Time: 10-2-24 4:35		Company:		Received by: <i>[Signature]</i>		Date/Time: 10/3/24 9:14
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 5.8°C 4.9°C <i>[Signature]</i>				

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10/18/2024



Eurofins Raleigh

104 Woodwinds Industrial Court Suite A
 Cary, NC 27511
 Phone: 919-467-3090

Chain of Custody Record



eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bechtold, Chad	Carrier Tracking No(s):	COC No: 752-4015.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 2
Company: Eurofins Environment Testing Southeast L	Accreditations Required (See note): State - North Carolina (WWW/SW)			Job #: 752-24759-1

Address: 3355 McLemore Drive, City: Pensacola State, Zip: FL, 32514 Phone: 850-474-1001(Tel) 850-478-2671(Fax) Email:	Due Date Requested: 10/10/2024 TAT Requested (days): PO #: WO #:	Analysis Requested			Preservation Codes: -
Project Name: PRLF -special pricing Site:	Project #: 68026680 SSOW#:	8260D/6030C VOC NC 02L List 8270E_SIM_ID_D5/0510C_LVI 1,4 Dioxane 9056A_ORGFM_28DI Sulfate			Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code														Special Instructions/Note:							
					1	2	3	4	5	6	7	8	9	10	11	12	13	14								
MW-1 (752-24759-1)	10/1/24	10:55 Eastern	G	Water							X	X	X													
MW-3 (752-24759-2)	10/1/24	10:25 Eastern	G	Water							X	X	X													
MW-4 (752-24759-3)	10/1/24	12:00 Eastern	G	Water							X															
MW-5 (752-24759-4)	10/1/24	15:15 Eastern	G	Water							X	X	X													
MW-6 (752-24759-5)	10/1/24	13:25 Eastern	G	Water							X	X	X													
MW-7 (752-24759-6)	10/1/24	13:15 Eastern	G	Water							X	X	X													
MW-8 (752-24759-7)	10/1/24	11:45 Eastern	G	Water							X	X	X													
MW-9 (752-24759-8)	10/1/24	12:25 Eastern	G	Water							X	X	X													
DUP-01 (752-24759-9)	10/1/24	Eastern	G	Water							X	X	X													

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification Unconfirmed	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2
Special Instructions/QC Requirements:	

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: pb	Date/Time: 10/2/24 16:00	Received by: BP	Date/Time: 10/3/24 9AM
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.8°C IIR 4.9°C	

Page 85 of 92

10/18/2024



Eurofins Raleigh

104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record



Environment Testing

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Bechtold, Chad		Carrier Tracking No(s):		COC No: 752-4015.2																																																																											
Client Contact: Shipping/Receiving		Phone:		E-Mail: Chad.Bechtold@et.eurofinsus.com		State of Origin: North Carolina		Page: Page 2 of 2																																																																											
Company: Eurofins Environment Testing Southeast L				Accreditations Required (See note): State - North Carolina (WWW/SW)				Job #: 752-24759-1																																																																											
Address: 3355 McLemore Drive,		Due Date Requested: 10/10/2024		<table border="1"> <thead> <tr> <th colspan="12">Analysis Requested</th> </tr> <tr> <th>Field Filtered Sample (Yes or No)</th> <th>Petroleum (S) (USD) (Yes or No)</th> <th>8260D/5030C VOC NC 02L List</th> <th>8270E_SIM_ID_D5/3510C_LV1 1.4 Dioxane</th> <th>9056A_ORGFM_28D/ Sulfate</th> <th></th><th></th><th></th><th></th><th></th><th></th><th></th> </tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </tbody> </table>						Analysis Requested												Field Filtered Sample (Yes or No)	Petroleum (S) (USD) (Yes or No)	8260D/5030C VOC NC 02L List	8270E_SIM_ID_D5/3510C_LV1 1.4 Dioxane	9056A_ORGFM_28D/ Sulfate																																																								Preservation Codes: -	
Analysis Requested																																																																																			
Field Filtered Sample (Yes or No)	Petroleum (S) (USD) (Yes or No)	8260D/5030C VOC NC 02L List	8270E_SIM_ID_D5/3510C_LV1 1.4 Dioxane							9056A_ORGFM_28D/ Sulfate																																																																									
City: Pensacola		TAT Requested (days):		PO #:		WO #:		Project #: 68026680		Project Name: PRLF -special pricing		Site:		SSOW#:		Other:																																																																			
State, Zip: FL, 32514		Project #:		Project Name:		Site:		SSOW#:		Other:		Special Instructions/Note:																																																																							
Phone: 850-474-1001(Tel) 850-478-2671(Fax)		Project #:		Project Name:		Site:		SSOW#:		Other:		Special Instructions/Note:																																																																							
Email:		Project #:		Project Name:		Site:		SSOW#:		Other:		Special Instructions/Note:																																																																							
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Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Unconfirmed				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			

Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2	Special Instructions/QC Requirements:
--	-----------------------------	---------------------------------------

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
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Relinquished by: <i>PG</i>	Date/Time: <i>10/2/24 16:00</i>	Company:	Received by: <i>[Signature]</i>	Date/Time: <i>10/3/24 9:14</i>	Company:
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Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
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Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
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Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: <i>4.9°C 5.8°C IES</i>
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Eurofins Raleigh

104 Woodwinds Industrial Court Suite A
 Cary, NC 27511
 Phone: 919-467-3090

Chain of Custody Record



eurofins | Environment Testing

Client Information (Sub Contract Lab)					Sampler: Bechtold, Chad		Lab PM: Bechtold, Chad		Carrier Tracking No(s):		COC No: 752-4011.1				
Client Contact: Shipping/Receiving					Phone:		E-Mail: Chad.Bechtold@et.eurofinsus.com		State of Origin: North Carolina		Page: Page 1 of 1				
Company: Eurofins Environment Testing Southeast L					Accreditations Required (See note): State - North Carolina (WW/SW)					Job #: 752-24759-1					
Address: 3080 Presidential Dr,					Due Date Requested: 10/10/2024		Analysis Requested					Preservation Codes: -			
City: Atlanta					TAT Requested (days):										
State, Zip: GA, 30340					PO #:		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B/3005A PRLF 16 Metals, including prep 7470A/7470A_Prep Mercury Total Number of containers					Other:			
Phone: 770-457-8177(Tel)					WO #:										
Email:					Project #: 68026680		Project Name: PRLF -special pricing Site: SSOW#:					Special Instructions/Note:			
Project Name: PRLF -special pricing					SSOW#:										
Site:					SSOW#:										
Sample Identification - Client ID (Lab ID)					Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		
MW-1 (752-24759-1)					10/1/24		10:55 Eastern		G Water		Water		X X		
MW-3 (752-24759-2)					10/1/24		10:25 Eastern		G Water		Water		X X		
MW-5 (752-24759-4)					10/1/24		15:15 Eastern		G Water		Water		X X		
MW-6 (752-24759-5)					10/1/24		13:25 Eastern		G Water		Water		X X		
MW-7 (752-24759-6)					10/1/24		13:15 Eastern		G Water		Water		X X		
MW-8 (752-24759-7)					10/1/24		11:45 Eastern		G Water		Water		X X		
MW-9 (752-24759-8)					10/1/24		12:25 Eastern		G Water		Water		X X		
DUP-01 (752-24759-9)					10/1/24		Eastern		G Water		Water		X X		
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.															
Possible Hazard Identification								Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed								<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)				Primary Deliverable Rank: 2				Special Instructions/QC Requirements:							
Empty Kit Relinquished by:				Date:				Time:				Method of Shipment: 1041			
Relinquished by: <i>Grant Kelly</i>				Date/Time: 10/1/24 1517				Company:				Received by: <i>[Signature]</i>			
Relinquished by:				Date/Time:				Company:				Received by:			
Relinquished by:				Date/Time:				Company:				Received by:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No				Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks: 20°							



Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-24759-1

Login Number: 24759

List Number: 1

Creator: Yonish, Rachel

List Source: Eurofins Raleigh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	



Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-24759-1

Login Number: 24759

List Number: 2

Creator: Woods, Autumn

List Source: Eurofins Atlanta

List Creation: 10/04/24 11:18 AM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-24759-1

Login Number: 24759

List Number: 3

Creator: Roberts, Darrien

List Source: Eurofins Pensacola

List Creation: 10/04/24 01:49 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.8°C, 4.9°C, 0.2°C, 0.5°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Appendix V – NCDEQ Risk Calculator Forms

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	Groundwater + Soil Gas Sitewide RC
Submittal Date:	11/25/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the site were input into the risk calculator.

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
325		67-64-1	Acetone			ug/L	MW-4									
280000		7664-41-7	Ammonia			ug/L	MW-3									
44.4		7440-38-2	Arsenic, Inorganic			ug/L	MW-1									
352	^3+	7440-39-3	Barium			ug/L	MW-6									
13.2		71-43-2	Benzene			ug/L	DUP-1 (MW-3)									
3.43		7440-41-7	Beryllium and compounds			ug/L	MW-6									
1.72		104-51-8	Butylbenzene, n-			ug/L	MW-4									
1.63	J	7440-43-9	Cadmium (Water)			ug/L	MW-6									
7.63	J	105-60-2	Caprolactam			ug/L	MW-1									
12.3		108-90-7	Chlorobenzene			ug/L	MW-6									
168	^3+	16065-83-1b	Chromium(III) (Soluble Compounds)			ug/L	MW-6									
7.2	J	7440-48-4	Cobalt			ug/L	MW-6									
71.7	^3+	7440-50-8	Copper			ug/L	MW-6									
2.03		98-82-8	Cumene			ug/L	MW-7									
0.522	J	95-50-1	Dichlorobenzene, 1,2-			ug/L	MW-4									
16.7		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-4									
0.99	J	75-34-3	Dichloroethane, 1,1-			ug/L	MW-1									
1.64		156-59-2	Dichloroethylene, cis-1,2-			ug/L	MW-6									
0.515	J	156-60-5	Dichloroethylene, trans-1,2-			ug/L	MW-6									
34.2		123-91-1	Dioxane, 1,4-			ug/L	DUP-1 (MW-3)									
371		141-78-6	Ethyl Acetate			ug/L	MW-4									
31.3		100-41-4	Ethylbenzene			ug/L	MW-4									
0.86	J	142-82-5	Heptane, N-			ug/L	DUP-1 (MW-3)									
75.3		7439-92-1	~Lead and Compounds			ug/L	MW-6									
1300		7439-96-5	Manganese (Non-diet)			ug/L	MW-7									
1.03		7439-97-6	~Mercury (elemental)			ug/L	MW-6									
624		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/L	MW-4									
179		108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)			ug/L	MW-4									
0.281	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	DUP-1 (MW-3)									
83.7	^3+	7440-02-0	Nickel Soluble Salts			ug/L	MW-6									
563		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-8									
6.09	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-6									
8.54	J	84-74-2	~Dibutyl Phthalate			ug/L	DUP-1(MW-3)									
30.5		84-66-2	~Diethyl Phthalate			ug/L	DUP-1(MW-3)									
4.68	J	91-57-6	~Methylnaphthalene, 2-			ug/L	DUP-1(MW-3)									
59.8		91-20-3	~Naphthalene			ug/L	DUP-1(MW-3)									
1.94		103-65-1	Propyl benzene			ug/L	MW-4									
14.6		7782-49-2	Selenium			ug/L	MW-6									
1.01	J^3+	7440-22-4	Silver			ug/L	MW-6									
28.2		108-88-3	Toluene			ug/L	MW-4									
0.611	J	79-01-6	Trichloroethylene			ug/L	MW-4									
23.4		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-4									
5.66		108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-4									
261		7440-62-2	Vanadium and Compounds			ug/L	MW-6									
77.8		1330-20-7	Xylenes			ug/L	MW-4									
1650		7440-66-6	Zinc and Compounds			ug/L	MW-6									

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the site were input into the risk calculator.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1600		67-64-1	Acetone			ug/m ³	SGI-12									
3800		71-43-2	Benzene			ug/m ³	DUP-2 (SGP-11)									
19		75-15-0	Carbon Disulfide			ug/m ³	SGP-3									
3700		108-90-7	Chlorobenzene			ug/m ³	DUP-4 (SGI-25)									
860		98-82-8	Cumene			ug/m ³	DUP-4 (SGI-25)									
14000		110-82-7	Cyclohexane			ug/m ³	SGP-7									
990		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-10									
120000	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-2									
1900		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGP-5									
330		75-35-4	Dichloroethylene, 1,1-			ug/m ³	SGP-5									
1600		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-22									
180		156-60-5	Dichloroethylene, trans-1,2-			ug/m ³	SGP-11									
74000		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-6									
14000		100-41-4	Ethylbenzene			ug/m ³	SGP-11									
240		109-99-9	~Tetrahydrofuran			ug/m ³	SGP-23									
36000		142-82-5	Heptane, N-			ug/m ³	SGP-7									
13000		110-54-3	Hexane, N-			ug/m ³	SGP-7									
133,811		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-1									
110		67-63-0	Isopropanol			ug/m ³	SGI-6									
410		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m ³	SGP-22									
670		103-65-1	Propyl benzene			ug/m ³	DUP-4 (SGI-25)									
52		100-42-5	Styrene			ug/m ³	SGP-22									
240		127-18-4	Tetrachloroethylene			ug/m ³	SGP-9									
3600		108-88-3	Toluene			ug/m ³	SGP-22									
1300		79-00-5	Trichloroethane, 1,1,2-			ug/m ³	SGI-25									
360		79-01-6	Trichloroethylene			ug/m ³	SGP-5									
3300	Freon 11	75-69-4	Trichlorofluoromethane			ug/m ³	SGP-7									
890		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-23									
510		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-23									
1800		75-01-4	Vinyl Chloride			ug/m ³	SGP-5									
22300		1330-20-7	Xylenes			ug/m ³	SGP-10									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.5E-03	3.0E+02	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	3.4E-04	7.1E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.4E-03	2.2E+03	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	8.9E-05	1.7E+02	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024 NOTE: If any changes were made, select "Update Sitewide Risk Values" to obtain updated values.

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

Receptor	Pathway	Resident - Current Scenario			Resident - Future Scenario			Non-Residential Worker - Current Scenario			Non-Residential Worker - Future Scenario			Construction Worker			Recreator/Trespasser		
		Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index	Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index	Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index	Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index	Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index	Check box to include in site-wide risk calculations	Carcinogenic Risk	Hazard Index
DIRECT CONTACT SOIL AND WATER CALCULATORS																			
Resident	Soil	<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM												
	Groundwater Use*	<input checked="" type="checkbox"/>	1.5E-03	3.0E+02	<input checked="" type="checkbox"/>	1.5E-03	3.0E+02												
Non-Residential Worker	Soil							<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM						
	Groundwater Use*							<input checked="" type="checkbox"/>	3.4E-04	7.1E+01	<input checked="" type="checkbox"/>	3.4E-04	7.1E+01						
Construction Worker	Soil												<input type="checkbox"/>	NM	NM				
Recreator/Trespasser	Soil																<input type="checkbox"/>	NM	NM
	Surface Water Use*																<input type="checkbox"/>	NM	NM
VAPOR INTRUSION CALCULATORS																			
Resident	Groundwater to Indoor Air	<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM												
	Soil Gas to Indoor Air	<input checked="" type="checkbox"/>	1.4E-03	2.2E+03	<input checked="" type="checkbox"/>	1.4E-03	2.2E+03												
	Indoor Air	<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM												
Non-Residential Worker	Groundwater to Indoor Air							<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM						
	Soil Gas to Indoor Air							<input checked="" type="checkbox"/>	8.9E-05	1.7E+02	<input checked="" type="checkbox"/>	8.9E-05	1.7E+02						
	Indoor Air							<input type="checkbox"/>	NM	NM	<input type="checkbox"/>	NM	NM						
TOTAL SITEWIDE RISK FOR EACH RECEPTOR			2.9E-03	2.5E+03		2.9E-03	2.5E+03		4.3E-04	2.4E+02		4.3E-04	2.4E+02			0.0E+00	0.0E+00	0.0E+00	0.0E+00

- Notes:
- If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
 - * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
 - NM = Not Modeled
 - NC = Pathway not calculated

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	325	325	325					1.8E-02	7.4E-05		1.8E-02
7664-41-7	Ammonia	280000	280000	280000							2.7E+02	2.7E+02
7440-38-2	Arsenic, Inorganic	44.4	44.4	44.4	8.5E-04	4.6E-06		8.6E-04	7.4E+00	3.3E-02		7.4E+00
7440-39-3	Barium	352	352	352					8.8E-02	5.5E-03		9.3E-02
71-43-2	Benzene	13.2	13.2	13.2	9.3E-06	1.3E-06	1.8E-05	2.9E-05	1.6E-01	2.2E-02	2.1E-01	4.0E-01
7440-41-7	Beryllium and compounds	3.43	3.43	3.43					8.6E-02	5.4E-02		1.4E-01
104-51-8	Butylbenzene, n-	1.72	1.72	1.72					1.7E-03			1.7E-03
7440-43-9	Cadmium (Water)	1.63	1.63	1.63					8.1E-01	7.2E-02		8.8E-01
105-60-2	Caprolactam	7.63	7.63	7.63					7.6E-04	8.5E-06		7.7E-04
108-90-7	Chlorobenzene	12.3	12.3	12.3					3.1E-02	9.6E-03	1.2E-01	1.6E-01
16065-83-1b	Chromium(III) (Soluble Compounds)	168	168	168								
7440-48-4	Cobalt	7.2	7.2	7.2					1.2E+00	2.1E-03		1.2E+00
7440-50-8	Copper	71.7	71.7	71.7					8.9E-02	3.9E-04		9.0E-02
98-82-8	Cumene	2.03	2.03	2.03					1.0E-03	1.1E-03	2.4E-03	4.5E-03
95-50-1	Dichlorobenzene, 1,2-	0.522	0.522	0.522					2.9E-04	1.8E-04	1.3E-03	1.7E-03
106-46-7	Dichlorobenzene, 1,4-	16.7	16.7	16.7	1.2E-06	7.9E-07	3.3E-05	3.5E-05	1.2E-02	7.5E-03	1.0E-02	2.9E-02
75-34-3	Dichloroethane, 1,1-	0.99	0.99	0.99	7.2E-08	5.4E-09	2.8E-07	3.6E-07	2.5E-04	1.7E-05		2.6E-04
156-59-2	Dichloroethylene, cis-1,2-	1.64	1.64	1.64					4.1E-02	4.5E-03	2.0E-02	6.5E-02
156-60-5	Dichloroethylene, trans-1,2-	0.515	0.515	0.515					1.3E-03	1.4E-04	6.2E-03	7.6E-03
123-91-1	Dioxane, 1,4-	34.2	34.2	34.2	4.4E-05	1.5E-07	3.0E-05	7.5E-05	5.7E-02	1.8E-04	5.5E-01	6.0E-01
141-78-6	Ethyl Acetate	371	371	371					2.6E-02	3.8E-04	2.5E+00	2.6E+00
100-41-4	Ethylbenzene	31.3	31.3	31.3	4.4E-06	2.5E-06	1.4E-05	2.1E-05	3.1E-02	1.6E-02	1.5E-02	6.3E-02
142-82-5	Heptane, N-	0.86	0.86	0.86					1.4E-01		1.0E-03	1.4E-01
7439-92-1	~Lead and Compounds	75.3	75.3	75.3					>SL**	>SL**	>SL**	
7439-96-5	Manganese (Non-diet)	1300	1300	1300					2.7E+00	3.0E-01		3.0E+00
7439-97-6	~Mercury (elemental)	1.03	1.03	1.03							1.6E+00	1.6E+00
78-93-3	Methyl Ethyl Ketone (2-Butanone)	624	624	624					5.2E-02	4.3E-04	6.0E-02	1.1E-01
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	179	179	179							2.9E-02	2.9E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.281	0.281	0.281	6.5E-09	1.4E-10	1.3E-08	2.0E-08			4.5E-05	4.5E-05
7440-02-0	Nickel Soluble Salts	83.7	83.7	83.7					2.1E-01	4.6E-03		2.1E-01
14797-55-8	Nitrate (measured as nitrogen)	563	563	563					1.8E-02	7.7E-05		1.8E-02
86-30-6	Nitrosodiphenylamine, N-	6.09	6.09	6.09	3.8E-07	1.2E-07		5.0E-07				
84-74-2	~Dibutyl Phthalate	8.54	8.54	8.54					4.3E-03	5.2E-03		9.5E-03
84-66-2	~Diethyl Phthalate	30.5	30.5	30.5					1.9E-03	1.5E-04		2.1E-03
91-57-6	~Methylnaphthalene, 2-	4.68	4.68	4.68					5.8E-02	7.2E-02		1.3E-01
91-20-3	~Naphthalene	59.8	59.8	59.8	9.2E-05	5.7E-05	3.6E-04	5.1E-04	1.5E-01	8.5E-02	9.6E+00	9.8E+00
103-65-1	Propyl benzene	1.94	1.94	1.94					9.7E-04	1.1E-03	9.3E-04	3.0E-03
7782-49-2	Selenium	14.6	14.6	14.6					1.5E-01	6.4E-04		1.5E-01
7440-22-4	Silver	1.01	1.01	1.01					1.0E-02	6.7E-04		1.1E-02
108-88-3	Toluene	28.2	28.2	28.2					1.8E-02	5.3E-03	2.7E-03	2.6E-02
79-01-6	Trichloroethylene	0.611	0.611	0.611	5.2E-07	8.2E-08	6.4E-07	1.2E-06	6.1E-02	8.9E-03	1.5E-01	2.2E-01
95-63-6	Trimethylbenzene, 1,2,4-	23.4	23.4	23.4					1.2E-01	1.2E-01	1.9E-01	4.2E-01
108-67-8	Trimethylbenzene, 1,3,5-	5.66	5.66	5.66					2.8E-02	2.0E-02	4.5E-02	9.4E-02
7440-62-2	Vanadium and Compounds	261	261	261					2.6E+00	4.4E-01		3.0E+00
1330-20-7	Xylenes	77.8	77.8	77.8					1.9E-02	1.0E-02	3.7E-01	4.0E-01
7440-66-6	Zinc and Compounds	1650	1650	1650					2.7E-01	7.3E-04		2.7E-01

Cumulative:

1.5E-03

3.0E+02

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	325	325	325					2.6E-03	3.5E-05		2.6E-03
7664-41-7	Ammonia	280000	280000	280000								
7440-38-2	Arsenic, Inorganic	44.4	44.4	44.4	1.7E-04	2.7E-06		1.7E-04	1.1E+00	1.7E-02	6.4E+01	1.1E+00
7440-39-3	Barium	352	352	352					1.3E-02	2.8E-03		1.5E-02
71-43-2	Benzene	13.2	13.2	13.2	1.8E-06	7.9E-07	4.2E-06	6.8E-06	2.3E-02	1.0E-02	5.0E-02	8.4E-02
7440-41-7	Beryllium and compounds	3.43	3.43	3.43					1.2E-02	2.8E-02		4.0E-02
104-51-8	Butylbenzene, n-	1.72	1.72	1.72					2.4E-04			2.4E-04
7440-43-9	Cadmium (Water)	1.63	1.63	1.63					1.2E-01	3.7E-02		1.5E-01
105-60-2	Caprolactam	7.63	7.63	7.63					1.1E-04	3.9E-06		1.1E-04
108-90-7	Chlorobenzene	12.3	12.3	12.3					4.4E-03	4.4E-03	2.8E-02	3.7E-02
16065-83-1b	Chromium(III) (Soluble Compounds)	168	168	168								
7440-48-4	Cobalt	7.2	7.2	7.2					1.7E-01	1.1E-03		1.7E-01
7440-50-8	Copper	71.7	71.7	71.7					1.3E-02	2.0E-04		1.3E-02
98-82-8	Cumene	2.03	2.03	2.03					1.4E-04	4.9E-04	5.8E-04	1.2E-03
95-50-1	Dichlorobenzene, 1,2-	0.522	0.522	0.522					4.1E-05	8.2E-05	3.0E-04	4.2E-04
106-46-7	Dichlorobenzene, 1,4-	16.7	16.7	16.7	2.3E-07	4.6E-07	7.5E-06	8.2E-06	1.7E-03	3.4E-03	2.4E-03	7.5E-03
75-34-3	Dichloroethane, 1,1-	0.99	0.99	0.99	1.4E-08	3.2E-09	6.5E-08	8.2E-08	3.5E-05	7.8E-06		4.3E-05
156-59-2	Dichloroethylene, cis-1,2-	1.64	1.64	1.64					5.8E-03	2.1E-03	4.7E-03	1.3E-02
156-60-5	Dichloroethylene, trans-1,2-	0.515	0.515	0.515					1.8E-04	6.5E-05	1.5E-03	1.7E-03
123-91-1	Dioxane, 1,4-	34.2	34.2	34.2	8.7E-06	8.8E-08	7.0E-06	1.6E-05	8.1E-03	8.2E-05	1.3E-01	1.4E-01
141-78-6	Ethyl Acetate	371	371	371					3.8E-03	1.8E-04	6.1E-01	6.1E-01
100-41-4	Ethylbenzene	31.3	31.3	31.3	8.7E-07	1.5E-06	3.2E-06	5.5E-06	4.4E-03	7.6E-03	3.6E-03	1.6E-02
142-82-5	Heptane, N-	0.86	0.86	0.86					2.0E-02			2.5E-04
7439-92-1	-Lead and Compounds	75.3	75.3	75.3					>SL**	>SL**	>SL**	
7439-96-5	Manganese (Non-diet)	1300	1300	1300					3.8E-01	1.5E-01		5.4E-01
7439-97-6	-Mercury (elemental)	1.03	1.03	1.03								3.9E-01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	624	624	624					7.4E-03	2.0E-04	1.4E-02	2.2E-02
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	179	179	179							6.8E-03	6.8E-03
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.281	0.281	0.281	1.3E-09	8.3E-11	3.0E-09	4.3E-09			1.1E-05	1.1E-05
7440-02-0	Nickel Soluble Salts	83.7	83.7	83.7					3.0E-02	2.4E-03		3.2E-02
14797-55-8	Nitrate (measured as nitrogen)	563	563	563					2.5E-03	4.0E-05		2.5E-03
86-30-6	Nitrosodiphenylamine, N-	6.09	6.09	6.09	7.6E-08	6.8E-08		1.4E-07				
84-74-2	-Dibutyl Phthalate	8.54	8.54	8.54					6.1E-04	2.4E-03		3.0E-03
84-66-2	-Diethyl Phthalate	30.5	30.5	30.5					2.7E-04	7.1E-05		3.4E-04
91-57-6	-Methylnaphthalene, 2-	4.68	4.68	4.68					8.3E-03	3.3E-02		4.1E-02
91-20-3	-Naphthalene	59.8	59.8	59.8	1.8E-05	3.4E-05	8.3E-05	1.3E-04	2.1E-02	3.9E-02	2.3E+00	2.3E+00
103-65-1	Propyl benzene	1.94	1.94	1.94					1.4E-04	4.9E-04	2.2E-04	8.5E-04
7782-49-2	Selenium	14.6	14.6	14.6					2.1E-02	3.3E-04		2.1E-02
7440-22-4	Silver	1.01	1.01	1.01					1.4E-03	3.4E-04		1.8E-03
108-88-3	Toluene	28.2	28.2	28.2					2.5E-03	2.5E-03	6.4E-04	5.6E-03
79-01-6	Trichloroethylene	0.611	0.611	0.611	7.1E-08	3.4E-08	1.02E-07	2.1E-07	8.7E-03	4.1E-03	3.5E-02	4.8E-02
95-63-6	Trimethylbenzene, 1,2,4-	23.4	23.4	23.4					1.7E-02	5.4E-02	4.5E-02	1.1E-01
108-67-8	Trimethylbenzene, 1,3,5-	5.66	5.66	5.66					4.0E-03	9.4E-03	1.1E-02	2.4E-02
7440-62-2	Vanadium and Compounds	261	261	261					3.7E-01	2.2E-01		5.9E-01
1330-20-7	Xylenes	77.8	77.8	77.8					2.8E-03	4.8E-03	8.9E-02	9.6E-02
7440-66-6	Zinc and Compounds	1650	1650	1650					3.9E-02	3.7E-04		3.9E-02

Cumulative: 3.4E-04 7.1E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	1600	48	-	-		
71-43-2	Benzene	3800	114	3.6E-01	6.3E+00	3.2E-04	3.6E+00
75-15-0	Carbon Disulfide	19	0.57	-	1.5E+02		7.8E-04
108-90-7	Chlorobenzene	3700	111	-	1.0E+01		2.1E+00
98-82-8	Cumene	860	25.8	-	8.3E+01		6.2E-02
110-82-7	Cyclohexane	14000	420	-	1.3E+03		6.7E-02
106-46-7	Dichlorobenzene, 1,4-	990	29.7	2.6E-01	1.7E+02	1.2E-04	3.6E-02
75-71-8	Dichlorodifluoromethane	120000	3600	-	2.1E+01		3.5E+01
75-34-3	Dichloroethane, 1,1-	1900	57	1.8E+00	-	3.2E-05	
75-35-4	Dichloroethylene, 1,1-	330	9.9	-	4.2E+01		4.7E-02
156-59-2	Dichloroethylene, cis-1,2-	1600	48	-	8.3E+00		1.2E+00
156-60-5	Dichloroethylene, trans-1,2-	180	5.4	-	8.3E+00		1.3E-01
75-00-3	Ethyl Chloride (Chloroethane)	74000	2220	-	8.3E+02		5.3E-01
100-41-4	Ethylbenzene	14000	420	1.1E+00	2.1E+02	3.7E-04	4.0E-01
109-99-9	~Tetrahydrofuran	240	7.2	-	4.2E+02		3.5E-03
142-82-5	Heptane, N-	36000	1080	-	8.3E+01		2.6E+00
110-54-3	Hexane, N-	13000	390	-	1.5E+02		5.3E-01
7783-06-4	Hydrogen Sulfide	133811	4014.33	-	4.2E-01		1.9E+03
67-63-0	Isopropanol	110	3.3	-	4.2E+01		1.6E-02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	410	12.3	-	1.0E+03		2.4E-03
103-65-1	Propyl benzene	670	20.1	-	2.1E+02		1.9E-02
100-42-5	Styrene	52	1.56	-	2.1E+02		1.5E-03
127-18-4	Tetrachloroethylene	240	7.2	1.1E+01	8.3E+00	6.7E-07	1.7E-01
108-88-3	Toluene	3600	108	-	1.0E+03		2.1E-02
79-00-5	Trichloroethane, 1,1,2-	1300	39	1.8E-01	4.2E-02	2.2E-04	1.9E+02
79-01-6	Trichloroethylene	360	10.8	4.8E-01	4.2E-01	2.3E-05	5.2E+00
75-69-4	Trichlorofluoromethane	3300	99	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	890	26.7	-	1.3E+01		4.3E-01
108-67-8	Trimethylbenzene, 1,3,5-	510	15.3	-	1.3E+01		2.4E-01
75-01-4	Vinyl Chloride	1800	54	1.7E-01	2.1E+01	3.2E-04	5.2E-01
1330-20-7	Xylenes	22300	669	-	2.1E+01		6.4E+00

Cumulative:	1.4E-03	2.2E+03
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Groundwater + Soil Gas Sitewide RC

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	1600	16	-	-		
71-43-2	Benzene	3800	38	1.6E+00	2.6E+01	2.4E-05	2.9E-01
75-15-0	Carbon Disulfide	19	0.19	-	6.1E+02		6.2E-05
108-90-7	Chlorobenzene	3700	37	-	4.4E+01		1.7E-01
98-82-8	Cumene	860	8.6	-	3.5E+02		4.9E-03
110-82-7	Cyclohexane	14000	140	-	5.3E+03		5.3E-03
106-46-7	Dichlorobenzene, 1,4-	990	9.9	1.1E+00	7.0E+02	8.9E-06	2.8E-03
75-71-8	Dichlorodifluoromethane	120000	1200	-	8.8E+01		2.7E+00
75-34-3	Dichloroethane, 1,1-	1900	19	7.7E+00	-	2.5E-06	
75-35-4	Dichloroethylene, 1,1-	330	3.3	-	1.8E+02		3.8E-03
156-59-2	Dichloroethylene, cis-1,2-	1600	16	-	3.5E+01		9.1E-02
156-60-5	Dichloroethylene, trans-1,2-	180	1.8	-	3.5E+01		1.0E-02
75-00-3	Ethyl Chloride (Chloroethane)	74000	740	-	3.5E+03		4.2E-02
100-41-4	Ethylbenzene	14000	140	4.9E+00	8.8E+02	2.9E-05	3.2E-02
109-99-9	~Tetrahydrofuran	240	2.4	-	1.8E+03		2.7E-04
142-82-5	Heptane, N-	36000	360	-	3.5E+02		2.1E-01
110-54-3	Hexane, N-	13000	130	-	6.1E+02		4.2E-02
7783-06-4	Hydrogen Sulfide	133811	1338.11	-	1.8E+00		1.5E+02
67-63-0	Isopropanol	110	1.1	-	1.8E+02		1.3E-03
78-93-3	Methyl Ethyl Ketone (2-Butanone)	410	4.1	-	4.4E+03		1.9E-04
103-65-1	Propyl benzene	670	6.7	-	8.8E+02		1.5E-03
100-42-5	Styrene	52	0.52	-	8.8E+02		1.2E-04
127-18-4	Tetrachloroethylene	240	2.4	4.7E+01	3.5E+01	5.1E-08	1.4E-02
108-88-3	Toluene	3600	36	-	4.4E+03		1.6E-03
79-00-5	Trichloroethane, 1,1,2-	1300	13	7.7E-01	1.8E-01	1.7E-05	1.5E+01
79-01-6	Trichloroethylene	360	3.6	3.0E+00	1.8E+00	1.2E-06	4.1E-01
75-69-4	Trichlorofluoromethane	3300	33	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	890	8.9	-	5.3E+01		3.4E-02
108-67-8	Trimethylbenzene, 1,3,5-	510	5.1	-	5.3E+01		1.9E-02
75-01-4	Vinyl Chloride	1800	18	2.8E+00	8.8E+01	6.5E-06	4.1E-02
1330-20-7	Xylenes	22300	223	-	8.8E+01		5.1E-01

Cumulative:	8.9E-05	1.7E+02
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-1
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-1

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sample location

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
260		71-43-2	Benzene			ug/m ³	SGP-1									
35		108-90-7	Chlorobenzene			ug/m ³	SGP-1									
280		98-82-8	Cumene			ug/m ³	SGP-1									
270		110-82-7	Cyclohexane			ug/m ³	SGP-1									
74		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-1									
520		75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-1									
930		142-82-5	Heptane, N-			ug/m ³	SGP-1									
1300		110-54-3	Hexane, N-			ug/m ³	SGP-1									
133,811		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-1									
180		103-65-1	Propyl benzene			ug/m ³	SGP-1									
53		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-1									
83		75-01-4	Vinyl Chloride			ug/m ³	SGP-1									
36		1330-20-7	Xylenes			ug/m ³	SGP-1									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-1

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.5E-05	1.9E+03	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.6E-06	1.5E+02	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-1

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	260	7.8	3.6E-01	6.3E+00	2.2E-05	2.5E-01
108-90-7	Chlorobenzene	35	1.05	-	1.0E+01		2.0E-02
98-82-8	Cumene	280	8.4	-	8.3E+01		2.0E-02
110-82-7	Cyclohexane	270	8.1	-	1.3E+03		1.3E-03
106-46-7	Dichlorobenzene, 1,4-	74	2.22	2.6E-01	1.7E+02	8.7E-06	2.7E-03
75-71-8	Dichlorodifluoromethane	520	15.6	-	2.1E+01		1.5E-01
142-82-5	Heptane, N-	930	27.9	-	8.3E+01		6.7E-02
110-54-3	Hexane, N-	1300	39	-	1.5E+02		5.3E-02
7783-06-4	Hydrogen Sulfide	133811	4014.33	-	4.2E-01		1.9E+03
103-65-1	Propyl benzene	180	5.4	-	2.1E+02		5.2E-03
95-63-6	Trimethylbenzene, 1,2,4-	53	1.59	-	1.3E+01		2.5E-02
75-01-4	Vinyl Chloride	83	2.49	1.7E-01	2.1E+01	1.5E-05	2.4E-02
1330-20-7	Xylenes	36	1.08	-	2.1E+01		1.0E-02

Cumulative:	4.5E-05	1.9E+03
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-1

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	260	2.6	1.6E+00	2.6E+01	1.7E-06	2.0E-02
108-90-7	Chlorobenzene	35	0.35	-	4.4E+01		1.6E-03
98-82-8	Cumene	280	2.8	-	3.5E+02		1.6E-03
110-82-7	Cyclohexane	270	2.7	-	5.3E+03		1.0E-04
106-46-7	Dichlorobenzene, 1,4-	74	0.74	1.1E+00	7.0E+02	6.6E-07	2.1E-04
75-71-8	Dichlorodifluoromethane	520	5.2	-	8.8E+01		1.2E-02
142-82-5	Heptane, N-	930	9.3	-	3.5E+02		5.3E-03
110-54-3	Hexane, N-	1300	13	-	6.1E+02		4.2E-03
7783-06-4	Hydrogen Sulfide	133811	1338.11	-	1.8E+00		1.5E+02
103-65-1	Propyl benzene	180	1.8	-	8.8E+02		4.1E-04
95-63-6	Trimethylbenzene, 1,2,4-	53	0.53	-	5.3E+01		2.0E-03
75-01-4	Vinyl Chloride	83	0.83	2.8E+00	8.8E+01	3.0E-07	1.9E-03
1330-20-7	Xylenes	36	0.36	-	8.8E+01		8.2E-04

Cumulative:	2.6E-06	1.5E+02
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-2
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-2

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
780		71-43-2	Benzene			ug/m ³	SGP-2									
1100		110-82-7	Cyclohexane			ug/m ³	SGP-2									
120000	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-2									
1600		142-82-5	Heptane, N-			ug/m ³	SGP-2									
960		110-54-3	Hexane, N-			ug/m ³	SGP-2									
19,514		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-2									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-2

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.5E-05	3.2E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.0E-06	2.5E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-2

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	780	23.4	3.6E-01	6.3E+00	6.5E-05	7.5E-01
110-82-7	Cyclohexane	1100	33	-	1.3E+03		5.3E-03
75-71-8	Dichlorodifluoromethane	120000	3600	-	2.1E+01		3.5E+01
142-82-5	Heptane, N-	1600	48	-	8.3E+01		1.2E-01
110-54-3	Hexane, N-	960	28.8	-	1.5E+02		3.9E-02
7783-06-4	Hydrogen Sulfide	19514	585.42	-	4.2E-01		2.8E+02

Cumulative:	6.5E-05	3.2E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-2

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	780	7.8	1.6E+00	2.6E+01	5.0E-06	5.9E-02
110-82-7	Cyclohexane	1100	11	-	5.3E+03		4.2E-04
75-71-8	Dichlorodifluoromethane	120000	1200	-	8.8E+01		2.7E+00
142-82-5	Heptane, N-	1600	16	-	3.5E+02		9.1E-03
110-54-3	Hexane, N-	960	9.6	-	6.1E+02		3.1E-03
7783-06-4	Hydrogen Sulfide	19514	195.14	-	1.8E+00		2.2E+01

Cumulative:	5.0E-06	2.5E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-3
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-3

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location. Location of DUP-1

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
98		67-64-1	Acetone			ug/m ³	SGP-3									
10		71-43-2	Benzene			ug/m ³	SGP-3									
19		75-15-0	Carbon Disulfide			ug/m ³	SGP-3									
5		110-82-7	Cyclohexane			ug/m ³	SGP-3									
150	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-3									
7.2		110-54-3	Hexane, N-			ug/m ³	SGP-3									
8,781		7783-06-4	Hydrogen Sulfide			ug/m ³	DUP-1 (SGP-3)									
9.8		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m ³	SGP-3									
16		127-18-4	Tetrachloroethylene			ug/m ³	SGP-3									
50		108-88-3	Toluene			ug/m ³	SGP-3									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-3

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	8.8E-07	1.3E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.7E-08	1.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-3

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	98	2.94	-	-		
71-43-2	Benzene	10	0.3	3.6E-01	6.3E+00	8.3E-07	9.6E-03
75-15-0	Carbon Disulfide	19	0.57	-	1.5E+02		7.8E-04
110-82-7	Cyclohexane	5	0.15	-	1.3E+03		2.4E-05
75-71-8	Dichlorodifluoromethane	150	4.5	-	2.1E+01		4.3E-02
110-54-3	Hexane, N-	7.2	0.216	-	1.5E+02		3.0E-04
7783-06-4	Hydrogen Sulfide	8781	263.43	-	4.2E-01		1.3E+02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	9.8	0.294	-	1.0E+03		5.6E-05
127-18-4	Tetrachloroethylene	16	0.48	1.1E+01	8.3E+00	4.4E-08	1.2E-02
108-88-3	Toluene	50	1.5	-	1.0E+03		2.9E-04

Cumulative:	8.8E-07	1.3E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-3

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	98	0.98	-	-		
71-43-2	Benzene	10	0.1	1.6E+00	2.6E+01	6.4E-08	7.6E-04
75-15-0	Carbon Disulfide	19	0.19	-	6.1E+02		6.2E-05
110-82-7	Cyclohexane	5	0.05	-	5.3E+03		1.9E-06
75-71-8	Dichlorodifluoromethane	150	1.5	-	8.8E+01		3.4E-03
110-54-3	Hexane, N-	7.2	0.072	-	6.1E+02		2.3E-05
7783-06-4	Hydrogen Sulfide	8781	87.81	-	1.8E+00		1.0E+01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	9.8	0.098	-	4.4E+03		4.5E-06
127-18-4	Tetrachloroethylene	16	0.16	4.7E+01	3.5E+01	3.4E-09	9.1E-04
108-88-3	Toluene	50	0.5	-	4.4E+03		2.3E-05

Cumulative:	6.7E-08	1.0E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-4
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024
 Basis: May 2024 EPA RSL Table
 Site ID: NCD980502900
 Exposure Unit ID: LFG Assessment SGP-4

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.
 If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
370		71-43-2	Benzene			ug/m ³	SGP-4									
74		108-90-7	Chlorobenzene			ug/m ³	SGP-4									
1000		110-82-7	Cyclohexane			ug/m ³	SGP-4									
920	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-4									
220		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-4									
1200		100-41-4	Ethylbenzene			ug/m ³	SGP-4									
2500		142-82-5	Heptane, N-			ug/m ³	SGP-4									
1200		110-54-3	Hexane, N-			ug/m ³	SGP-4									
404		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-4									
110		103-65-1	Propyl benzene			ug/m ³	SGP-4									
69		108-88-3	Toluene			ug/m ³	SGP-4									
88		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-4									
61		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-4									
57		75-01-4	Vinyl Chloride			ug/m ³	SGP-4									
5900		1330-20-7	Xylenes			ug/m ³	SGP-4									

Risk for Individual Pathways	Output Form 1A
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-4

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.3E-05	8.7E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.0E-06	6.9E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-4

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	370	11.1	3.6E-01	6.3E+00	3.1E-05	3.5E-01
108-90-7	Chlorobenzene	74	2.22	-	1.0E+01		4.3E-02
110-82-7	Cyclohexane	1000	30	-	1.3E+03		4.8E-03
75-71-8	Dichlorodifluoromethane	920	27.6	-	2.1E+01		2.6E-01
156-59-2	Dichloroethylene, cis-1,2-	220	6.6	-	8.3E+00		1.6E-01
100-41-4	Ethylbenzene	1200	36	1.1E+00	2.1E+02	3.2E-05	3.5E-02
142-82-5	Heptane, N-	2500	75	-	8.3E+01		1.8E-01
110-54-3	Hexane, N-	1200	36	-	1.5E+02		4.9E-02
7783-06-4	Hydrogen Sulfide	404	12.12	-	4.2E-01		5.8E+00
103-65-1	Propyl benzene	110	3.3	-	2.1E+02		3.2E-03
108-88-3	Toluene	69	2.07	-	1.0E+03		4.0E-04
95-63-6	Trimethylbenzene, 1,2,4-	88	2.64	-	1.3E+01		4.2E-02
108-67-8	Trimethylbenzene, 1,3,5-	61	1.83	-	1.3E+01		2.9E-02
75-01-4	Vinyl Chloride	57	1.71	1.7E-01	2.1E+01	1.0E-05	1.6E-02
1330-20-7	Xylenes	5900	177	-	2.1E+01		1.7E+00

Cumulative:	7.3E-05	8.7E+00
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-4

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	370	3.7	1.6E+00	2.6E+01	2.4E-06	2.8E-02
108-90-7	Chlorobenzene	74	0.74	-	4.4E+01		3.4E-03
110-82-7	Cyclohexane	1000	10	-	5.3E+03		3.8E-04
75-71-8	Dichlorodifluoromethane	920	9.2	-	8.8E+01		2.1E-02
156-59-2	Dichloroethylene, cis-1,2-	220	2.2	-	3.5E+01		1.3E-02
100-41-4	Ethylbenzene	1200	12	4.9E+00	8.8E+02	2.4E-06	2.7E-03
142-82-5	Heptane, N-	2500	25	-	3.5E+02		1.4E-02
110-54-3	Hexane, N-	1200	12	-	6.1E+02		3.9E-03
7783-06-4	Hydrogen Sulfide	404	4.04	-	1.8E+00		4.6E-01
103-65-1	Propyl benzene	110	1.1	-	8.8E+02		2.5E-04
108-88-3	Toluene	69	0.69	-	4.4E+03		3.2E-05
95-63-6	Trimethylbenzene, 1,2,4-	88	0.88	-	5.3E+01		3.3E-03
108-67-8	Trimethylbenzene, 1,3,5-	61	0.61	-	5.3E+01		2.3E-03
75-01-4	Vinyl Chloride	57	0.57	2.8E+00	8.8E+01	2.0E-07	1.3E-03
1330-20-7	Xylenes	5900	59	-	8.8E+01		1.3E-01

Cumulative:	5.0E-06	6.9E-01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-5
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-5

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
440		67-64-1	Acetone			ug/m ³	SGP-5									
410		71-43-2	Benzene			ug/m ³	SGP-5									
3500		110-82-7	Cyclohexane			ug/m ³	SGP-5									
520	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-5									
1900		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGP-5									
330		75-35-4	Dichloroethylene, 1,1-			ug/m ³	SGP-5									
1400		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-5									
160		156-60-5	Dichloroethylene, trans-1,2-			ug/m ³	SGP-5									
780		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-5									
4500		142-82-5	Heptane, N-			ug/m ³	SGP-5									
3300		110-54-3	Hexane, N-			ug/m ³	SGP-5									
293		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-5									
100		127-18-4	Tetrachloroethylene			ug/m ³	SGP-5									
360		79-01-6	Trichloroethylene			ug/m ³	SGP-5									
1800		75-01-4	Vinyl Chloride			ug/m ³	SGP-5									
45		1330-20-7	Xylenes			ug/m ³	SGP-5									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-5

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.1E-04	1.2E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.3E-05	9.7E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-5

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	440	13.2	-	-		
71-43-2	Benzene	410	12.3	3.6E-01	6.3E+00	3.4E-05	3.9E-01
110-82-7	Cyclohexane	3500	105	-	1.3E+03		1.7E-02
75-71-8	Dichlorodifluoromethane	520	15.6	-	2.1E+01		1.5E-01
75-34-3	Dichloroethane, 1,1-	1900	57	1.8E+00	-	3.2E-05	
75-35-4	Dichloroethylene, 1,1-	330	9.9	-	4.2E+01		4.7E-02
156-59-2	Dichloroethylene, cis-1,2-	1400	42	-	8.3E+00		1.0E+00
156-60-5	Dichloroethylene, trans-1,2-	160	4.8	-	8.3E+00		1.2E-01
75-00-3	Ethyl Chloride (Chloroethane)	780	23.4	-	8.3E+02		5.6E-03
142-82-5	Heptane, N-	4500	135	-	8.3E+01		3.2E-01
110-54-3	Hexane, N-	3300	99	-	1.5E+02		1.4E-01
7783-06-4	Hydrogen Sulfide	293	8.79	-	4.2E-01		4.2E+00
127-18-4	Tetrachloroethylene	100	3	1.1E+01	8.3E+00	2.8E-07	7.2E-02
79-01-6	Trichloroethylene	360	10.8	4.8E-01	4.2E-01	2.3E-05	5.2E+00
75-01-4	Vinyl Chloride	1800	54	1.7E-01	2.1E+01	3.2E-04	5.2E-01
1330-20-7	Xylenes	45	1.35	-	2.1E+01		1.3E-02

Cumulative:	4.1E-04	1.2E+01
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-5

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	440	4.4	-	-		
71-43-2	Benzene	410	4.1	1.6E+00	2.6E+01	2.6E-06	3.1E-02
110-82-7	Cyclohexane	3500	35	-	5.3E+03		1.3E-03
75-71-8	Dichlorodifluoromethane	520	5.2	-	8.8E+01		1.2E-02
75-34-3	Dichloroethane, 1,1-	1900	19	7.7E+00	-	2.5E-06	
75-35-4	Dichloroethylene, 1,1-	330	3.3	-	1.8E+02		3.8E-03
156-59-2	Dichloroethylene, cis-1,2-	1400	14	-	3.5E+01		8.0E-02
156-60-5	Dichloroethylene, trans-1,2-	160	1.6	-	3.5E+01		9.1E-03
75-00-3	Ethyl Chloride (Chloroethane)	780	7.8	-	3.5E+03		4.5E-04
142-82-5	Heptane, N-	4500	45	-	3.5E+02		2.6E-02
110-54-3	Hexane, N-	3300	33	-	6.1E+02		1.1E-02
7783-06-4	Hydrogen Sulfide	293	2.93	-	1.8E+00		3.3E-01
127-18-4	Tetrachloroethylene	100	1	4.7E+01	3.5E+01	2.1E-08	5.7E-03
79-01-6	Trichloroethylene	360	3.6	3.0E+00	1.8E+00	1.2E-06	4.1E-01
75-01-4	Vinyl Chloride	1800	18	2.8E+00	8.8E+01	6.5E-06	4.1E-02
1330-20-7	Xylenes	45	0.45	-	8.8E+01		1.0E-03

Cumulative:	1.3E-05	9.7E-01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-7
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-7

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
3200		71-43-2	Benzene			ug/m ³	SGP-7									
590		98-82-8	Cumene			ug/m ³	SGP-7									
14000		110-82-7	Cyclohexane			ug/m ³	SGP-7									
110		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-7									
5700	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-7									
250		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-7									
1500		100-41-4	Ethylbenzene			ug/m ³	SGP-7									
36000		142-82-5	Heptane, N-			ug/m ³	SGP-7									
13000		110-54-3	Hexane, N-			ug/m ³	SGP-7									
37,634		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-7									
320		103-65-1	Propyl benzene			ug/m ³	SGP-7									
290		108-88-3	Toluene			ug/m ³	SGP-7									
3300	Freon 11	75-69-4	Trichlorofluoromethane			ug/m ³	SGP-7									
230		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-7									
77		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-7									
4730		1330-20-7	Xylenes			ug/m ³	SGP-7									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-7

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.2E-04	5.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.4E-05	4.4E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-7

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	3200	96	3.6E-01	6.3E+00	2.7E-04	3.1E+00
98-82-8	Cumene	590	17.7	-	8.3E+01		4.2E-02
110-82-7	Cyclohexane	14000	420	-	1.3E+03		6.7E-02
106-46-7	Dichlorobenzene, 1,4-	110	3.3	2.6E-01	1.7E+02	1.3E-05	4.0E-03
75-71-8	Dichlorodifluoromethane	5700	171	-	2.1E+01		1.6E+00
75-00-3	Ethyl Chloride (Chloroethane)	250	7.5	-	8.3E+02		1.8E-03
100-41-4	Ethylbenzene	1500	45	1.1E+00	2.1E+02	4.0E-05	4.3E-02
142-82-5	Heptane, N-	36000	1080	-	8.3E+01		2.6E+00
110-54-3	Hexane, N-	13000	390	-	1.5E+02		5.3E-01
7783-06-4	Hydrogen Sulfide	37634	1129.02	-	4.2E-01		5.4E+02
103-65-1	Propyl benzene	320	9.6	-	2.1E+02		9.2E-03
108-88-3	Toluene	290	8.7	-	1.0E+03		1.7E-03
75-69-4	Trichlorofluoromethane	3300	99	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	230	6.9	-	1.3E+01		1.1E-01
108-67-8	Trimethylbenzene, 1,3,5-	77	2.31	-	1.3E+01		3.7E-02
1330-20-7	Xylenes	4730	141.9	-	2.1E+01		1.4E+00

Cumulative:	3.2E-04	5.5E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-7

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	3200	32	1.6E+00	2.6E+01	2.0E-05	2.4E-01
98-82-8	Cumene	590	5.9	-	3.5E+02		3.4E-03
110-82-7	Cyclohexane	14000	140	-	5.3E+03		5.3E-03
106-46-7	Dichlorobenzene, 1,4-	110	1.1	1.1E+00	7.0E+02	9.9E-07	3.1E-04
75-71-8	Dichlorodifluoromethane	5700	57	-	8.8E+01		1.3E-01
75-00-3	Ethyl Chloride (Chloroethane)	250	2.5	-	3.5E+03		1.4E-04
100-41-4	Ethylbenzene	1500	15	4.9E+00	8.8E+02	3.1E-06	3.4E-03
142-82-5	Heptane, N-	36000	360	-	3.5E+02		2.1E-01
110-54-3	Hexane, N-	13000	130	-	6.1E+02		4.2E-02
7783-06-4	Hydrogen Sulfide	37634	376.34	-	1.8E+00		4.3E+01
103-65-1	Propyl benzene	320	3.2	-	8.8E+02		7.3E-04
108-88-3	Toluene	290	2.9	-	4.4E+03		1.3E-04
75-69-4	Trichlorofluoromethane	3300	33	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	230	2.3	-	5.3E+01		8.8E-03
108-67-8	Trimethylbenzene, 1,3,5-	77	0.77	-	5.3E+01		2.9E-03
1330-20-7	Xylenes	4730	47.3	-	8.8E+01		1.1E-01

Cumulative:	2.4E-05	4.4E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-8
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-8

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
870		71-43-2	Benzene			ug/m ³	SGP-8									
170		108-90-7	Chlorobenzene			ug/m ³	SGP-8									
260		98-82-8	Cumene			ug/m ³	SGP-8									
980		110-82-7	Cyclohexane			ug/m ³	SGP-8									
56		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-8									
560	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-8									
140		100-41-4	Ethylbenzene			ug/m ³	SGP-8									
1800		142-82-5	Heptane, N-			ug/m ³	SGP-8									
1600		110-54-3	Hexane, N-			ug/m ³	SGP-8									
27,877		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-8									
150		103-65-1	Propyl benzene			ug/m ³	SGP-8									
51		108-88-3	Toluene			ug/m ³	SGP-8									
46		75-01-4	Vinyl Chloride			ug/m ³	SGP-8									
300		1330-20-7	Xylenes			ug/m ³	SGP-8									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-8

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.1E-05	4.0E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.5E-06	3.2E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-8

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	870	26.1	3.6E-01	6.3E+00	7.3E-05	8.3E-01
108-90-7	Chlorobenzene	170	5.1	-	1.0E+01		9.8E-02
98-82-8	Cumene	260	7.8	-	8.3E+01		1.9E-02
110-82-7	Cyclohexane	980	29.4	-	1.3E+03		4.7E-03
106-46-7	Dichlorobenzene, 1,4-	56	1.68	2.6E-01	1.7E+02	6.6E-06	2.0E-03
75-71-8	Dichlorodifluoromethane	560	16.8	-	2.1E+01		1.6E-01
100-41-4	Ethylbenzene	140	4.2	1.1E+00	2.1E+02	3.7E-06	4.0E-03
142-82-5	Heptane, N-	1800	54	-	8.3E+01		1.3E-01
110-54-3	Hexane, N-	1600	48	-	1.5E+02		6.6E-02
7783-06-4	Hydrogen Sulfide	27877	836.31	-	4.2E-01		4.0E+02
103-65-1	Propyl benzene	150	4.5	-	2.1E+02		4.3E-03
108-88-3	Toluene	51	1.53	-	1.0E+03		2.9E-04
75-01-4	Vinyl Chloride	46	1.38	1.7E-01	2.1E+01	8.2E-06	1.3E-02
1330-20-7	Xylenes	300	9	-	2.1E+01		8.6E-02

Cumulative:	9.1E-05	4.0E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-8

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	870	8.7	1.6E+00	2.6E+01	5.5E-06	6.6E-02
108-90-7	Chlorobenzene	170	1.7	-	4.4E+01		7.8E-03
98-82-8	Cumene	260	2.6	-	3.5E+02		1.5E-03
110-82-7	Cyclohexane	980	9.8	-	5.3E+03		3.7E-04
106-46-7	Dichlorobenzene, 1,4-	56	0.56	1.1E+00	7.0E+02	5.0E-07	1.6E-04
75-71-8	Dichlorodifluoromethane	560	5.6	-	8.8E+01		1.3E-02
100-41-4	Ethylbenzene	140	1.4	4.9E+00	8.8E+02	2.9E-07	3.2E-04
142-82-5	Heptane, N-	1800	18	-	3.5E+02		1.0E-02
110-54-3	Hexane, N-	1600	16	-	6.1E+02		5.2E-03
7783-06-4	Hydrogen Sulfide	27877	278.77	-	1.8E+00		3.2E+01
103-65-1	Propyl benzene	150	1.5	-	8.8E+02		3.4E-04
108-88-3	Toluene	51	0.51	-	4.4E+03		2.3E-05
75-01-4	Vinyl Chloride	46	0.46	2.8E+00	8.8E+01	1.7E-07	1.1E-03
1330-20-7	Xylenes	300	3	-	8.8E+01		6.8E-03

Cumulative:	6.5E-06	3.2E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-9
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-9

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
380		67-64-1	Acetone			ug/m ³	SGP-9									
2100		71-43-2	Benzene			ug/m ³	SGP-9									
200		108-90-7	Chlorobenzene			ug/m ³	SGP-9									
270		98-82-8	Cumene			ug/m ³	SGP-9									
2100		110-82-7	Cyclohexane			ug/m ³	SGP-9									
7800	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-9									
340		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGP-9									
200		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-9									
1800		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-9									
750		100-41-4	Ethylbenzene			ug/m ³	SGP-9									
2800		142-82-5	Heptane, N-			ug/m ³	SGP-9									
1400		110-54-3	Hexane, N-			ug/m ³	SGP-9									
307		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-9									
240		127-18-4	Tetrachloroethylene			ug/m ³	SGP-9									
450		108-88-3	Toluene			ug/m ³	SGP-9									
210		79-01-6	Trichloroethylene			ug/m ³	SGP-9									
76		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-9									
76		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-9									
60		75-01-4	Vinyl Chloride			ug/m ³	SGP-9									
1690		1330-20-7	Xylenes			ug/m ³	SGP-9									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-9

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.3E-04	1.3E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.6E-05	1.0E+00	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-9

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	380	11.4	-	-		
71-43-2	Benzene	2100	63	3.6E-01	6.3E+00	1.8E-04	2.0E+00
108-90-7	Chlorobenzene	200	6	-	1.0E+01		1.2E-01
98-82-8	Cumene	270	8.1	-	8.3E+01		1.9E-02
110-82-7	Cyclohexane	2100	63	-	1.3E+03		1.0E-02
75-71-8	Dichlorodifluoromethane	7800	234	-	2.1E+01		2.2E+00
75-34-3	Dichloroethane, 1,1-	340	10.2	1.8E+00	-	5.8E-06	
156-59-2	Dichloroethylene, cis-1,2-	200	6	-	8.3E+00		1.4E-01
75-00-3	Ethyl Chloride (Chloroethane)	1800	54	-	8.3E+02		1.3E-02
100-41-4	Ethylbenzene	750	22.5	1.1E+00	2.1E+02	2.0E-05	2.2E-02
142-82-5	Heptane, N-	2800	84	-	8.3E+01		2.0E-01
110-54-3	Hexane, N-	1400	42	-	1.5E+02		5.8E-02
7783-06-4	Hydrogen Sulfide	307	9.21	-	4.2E-01		4.4E+00
127-18-4	Tetrachloroethylene	240	7.2	1.1E+01	8.3E+00	6.7E-07	1.7E-01
108-88-3	Toluene	450	13.5	-	1.0E+03		2.6E-03
79-01-6	Trichloroethylene	210	6.3	4.8E-01	4.2E-01	1.3E-05	3.0E+00
95-63-6	Trimethylbenzene, 1,2,4-	76	2.28	-	1.3E+01		3.6E-02
108-67-8	Trimethylbenzene, 1,3,5-	76	2.28	-	1.3E+01		3.6E-02
75-01-4	Vinyl Chloride	60	1.8	1.7E-01	2.1E+01	1.1E-05	1.7E-02
1330-20-7	Xylenes	1690	50.7	-	2.1E+01		4.9E-01

Cumulative:	2.3E-04	1.3E+01
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-9

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	380	3.8	-	-		
71-43-2	Benzene	2100	21	1.6E+00	2.6E+01	1.3E-05	1.6E-01
108-90-7	Chlorobenzene	200	2	-	4.4E+01		9.1E-03
98-82-8	Cumene	270	2.7	-	3.5E+02		1.5E-03
110-82-7	Cyclohexane	2100	21	-	5.3E+03		8.0E-04
75-71-8	Dichlorodifluoromethane	7800	78	-	8.8E+01		1.8E-01
75-34-3	Dichloroethane, 1,1-	340	3.4	7.7E+00	-	4.4E-07	
156-59-2	Dichloroethylene, cis-1,2-	200	2	-	3.5E+01		1.1E-02
75-00-3	Ethyl Chloride (Chloroethane)	1800	18	-	3.5E+03		1.0E-03
100-41-4	Ethylbenzene	750	7.5	4.9E+00	8.8E+02	1.5E-06	1.7E-03
142-82-5	Heptane, N-	2800	28	-	3.5E+02		1.6E-02
110-54-3	Hexane, N-	1400	14	-	6.1E+02		4.6E-03
7783-06-4	Hydrogen Sulfide	307	3.07	-	1.8E+00		3.5E-01
127-18-4	Tetrachloroethylene	240	2.4	4.7E+01	3.5E+01	5.1E-08	1.4E-02
108-88-3	Toluene	450	4.5	-	4.4E+03		2.1E-04
79-01-6	Trichloroethylene	210	2.1	3.0E+00	1.8E+00	7.0E-07	2.4E-01
95-63-6	Trimethylbenzene, 1,2,4-	76	0.76	-	5.3E+01		2.9E-03
108-67-8	Trimethylbenzene, 1,3,5-	76	0.76	-	5.3E+01		2.9E-03
75-01-4	Vinyl Chloride	60	0.6	2.8E+00	8.8E+01	2.2E-07	1.4E-03
1330-20-7	Xylenes	1690	16.9	-	8.8E+01		3.9E-02

Cumulative:	1.6E-05	1.0E+00
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-10
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-10

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
3600		71-43-2	Benzene			ug/m ³	SGP-10									
760		98-82-8	Cumene			ug/m ³	SGP-10									
6400		110-82-7	Cyclohexane			ug/m ³	SGP-10									
840	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-10									
750		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-10									
120		156-60-5	Dichloroethylene, trans-1,2-			ug/m ³	SGP-10									
14000		100-41-4	Ethylbenzene			ug/m ³	SGP-10									
21000		142-82-5	Heptane, N-			ug/m ³	SGP-10									
7100		110-54-3	Hexane, N-			ug/m ³	SGP-10									
23,696		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-10									
420		103-65-1	Propyl benzene			ug/m ³	SGP-10									
740		108-88-3	Toluene			ug/m ³	SGP-10									
850		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-10									
410		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-10									
310		75-01-4	Vinyl Chloride			ug/m ³	SGP-10									
22300		1330-20-7	Xylenes			ug/m ³	SGP-10									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-10

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.3E-04	3.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.3E-05	2.8E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-10

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	3600	108	3.6E-01	6.3E+00	3.0E-04	3.5E+00
98-82-8	Cumene	760	22.8	-	8.3E+01		5.5E-02
110-82-7	Cyclohexane	6400	192	-	1.3E+03		3.1E-02
75-71-8	Dichlorodifluoromethane	840	25.2	-	2.1E+01		2.4E-01
156-59-2	Dichloroethylene, cis-1,2-	750	22.5	-	8.3E+00		5.4E-01
156-60-5	Dichloroethylene, trans-1,2-	120	3.6	-	8.3E+00		8.6E-02
100-41-4	Ethylbenzene	14000	420	1.1E+00	2.1E+02	3.7E-04	4.0E-01
142-82-5	Heptane, N-	21000	630	-	8.3E+01		1.5E+00
110-54-3	Hexane, N-	7100	213	-	1.5E+02		2.9E-01
7783-06-4	Hydrogen Sulfide	23696	710.88	-	4.2E-01		3.4E+02
103-65-1	Propyl benzene	420	12.6	-	2.1E+02		1.2E-02
108-88-3	Toluene	740	22.2	-	1.0E+03		4.3E-03
95-63-6	Trimethylbenzene, 1,2,4-	850	25.5	-	1.3E+01		4.1E-01
108-67-8	Trimethylbenzene, 1,3,5-	410	12.3	-	1.3E+01		2.0E-01
75-01-4	Vinyl Chloride	310	9.3	1.7E-01	2.1E+01	5.5E-05	8.9E-02
1330-20-7	Xylenes	22300	669	-	2.1E+01		6.4E+00

Cumulative:	7.3E-04	3.5E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-10

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	3600	36	1.6E+00	2.6E+01	2.3E-05	2.7E-01
98-82-8	Cumene	760	7.6	-	3.5E+02		4.3E-03
110-82-7	Cyclohexane	6400	64	-	5.3E+03		2.4E-03
75-71-8	Dichlorodifluoromethane	840	8.4	-	8.8E+01		1.9E-02
156-59-2	Dichloroethylene, cis-1,2-	750	7.5	-	3.5E+01		4.3E-02
156-60-5	Dichloroethylene, trans-1,2-	120	1.2	-	3.5E+01		6.8E-03
100-41-4	Ethylbenzene	14000	140	4.9E+00	8.8E+02	2.9E-05	3.2E-02
142-82-5	Heptane, N-	21000	210	-	3.5E+02		1.2E-01
110-54-3	Hexane, N-	7100	71	-	6.1E+02		2.3E-02
7783-06-4	Hydrogen Sulfide	23696	236.96	-	1.8E+00		2.7E+01
103-65-1	Propyl benzene	420	4.2	-	8.8E+02		9.6E-04
108-88-3	Toluene	740	7.4	-	4.4E+03		3.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	850	8.5	-	5.3E+01		3.2E-02
108-67-8	Trimethylbenzene, 1,3,5-	410	4.1	-	5.3E+01		1.6E-02
75-01-4	Vinyl Chloride	310	3.1	2.8E+00	8.8E+01	1.1E-06	7.1E-03
1330-20-7	Xylenes	22300	223	-	8.8E+01		5.1E-01

Cumulative:	5.3E-05	2.8E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-11
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-11

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location. Location of DUP-2

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
180		67-64-1	Acetone			ug/m ³	SGP-11									
3800		71-43-2	Benzene			ug/m ³	SGP-11									
100		108-90-7	Chlorobenzene			ug/m ³	DUP-2 (SGP-11)									
410		98-82-8	Cumene			ug/m ³	DUP-2 (SGP-11)									
4500		110-82-7	Cyclohexane			ug/m ³	SGP-11									
120		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	DUP-2 (SGP-11)									
3700	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-11									
330		75-34-3	Dichloroethane, 1,1-			ug/m ³	DUP-2 (SGP-11)									
340		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-11									
180		156-60-5	Dichloroethylene, trans-1,2-			ug/m ³	SGP-11									
1100		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-11									
3600		100-41-4	Ethylbenzene			ug/m ³	DUP-2 (SGP-11)									
16000		142-82-5	Heptane, N-			ug/m ³	SGP-11									
5600		110-54-3	Hexane, N-			ug/m ³	SGP-11									
16,726		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-11									
240		103-65-1	Propyl benzene			ug/m ³	DUP-2 (SGP-11)									
160		108-88-3	Toluene			ug/m ³	SGP-11									
87		79-01-6	Trichloroethylene			ug/m ³	SGP-11									
400		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	DUP-2 (SGP-11)									
170		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	DUP-2 (SGP-11)									
280		75-01-4	Vinyl Chloride			ug/m ³	DUP-2 (SGP-11)									
18600		1330-20-7	Xylenes			ug/m ³	DUP-2 (SGP-11)									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-11

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.9E-04	2.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.4E-05	2.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-11

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	180	5.4	-	-		
71-43-2	Benzene	3800	114	3.6E-01	6.3E+00	3.2E-04	3.6E+00
108-90-7	Chlorobenzene	100	3	-	1.0E+01		5.8E-02
98-82-8	Cumene	410	12.3	-	8.3E+01		2.9E-02
110-82-7	Cyclohexane	4500	135	-	1.3E+03		2.2E-02
106-46-7	Dichlorobenzene, 1,4-	120	3.6	2.6E-01	1.7E+02	1.4E-05	4.3E-03
75-71-8	Dichlorodifluoromethane	3700	111	-	2.1E+01		1.1E+00
75-34-3	Dichloroethane, 1,1-	330	9.9	1.8E+00	-	5.6E-06	
156-59-2	Dichloroethylene, cis-1,2-	340	10.2	-	8.3E+00		2.4E-01
156-60-5	Dichloroethylene, trans-1,2-	180	5.4	-	8.3E+00		1.3E-01
75-00-3	Ethyl Chloride (Chloroethane)	1100	33	-	8.3E+02		7.9E-03
100-41-4	Ethylbenzene	3600	108	1.1E+00	2.1E+02	9.6E-05	1.0E-01
142-82-5	Heptane, N-	16000	480	-	8.3E+01		1.2E+00
110-54-3	Hexane, N-	5600	168	-	1.5E+02		2.3E-01
7783-06-4	Hydrogen Sulfide	16726	501.78	-	4.2E-01		2.4E+02
103-65-1	Propyl benzene	240	7.2	-	2.1E+02		6.9E-03
108-88-3	Toluene	160	4.8	-	1.0E+03		9.2E-04
79-01-6	Trichloroethylene	87	2.61	4.8E-01	4.2E-01	5.5E-06	1.3E+00
95-63-6	Trimethylbenzene, 1,2,4-	400	12	-	1.3E+01		1.9E-01
108-67-8	Trimethylbenzene, 1,3,5-	170	5.1	-	1.3E+01		8.2E-02
75-01-4	Vinyl Chloride	280	8.4	1.7E-01	2.1E+01	5.0E-05	8.1E-02
1330-20-7	Xylenes	18600	558	-	2.1E+01		5.4E+00

Cumulative:	4.9E-04	2.5E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-11

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	180	1.8	-	-		
71-43-2	Benzene	3800	38	1.6E+00	2.6E+01	2.4E-05	2.9E-01
108-90-7	Chlorobenzene	100	1	-	4.4E+01		4.6E-03
98-82-8	Cumene	410	4.1	-	3.5E+02		2.3E-03
110-82-7	Cyclohexane	4500	45	-	5.3E+03		1.7E-03
106-46-7	Dichlorobenzene, 1,4-	120	1.2	1.1E+00	7.0E+02	1.1E-06	3.4E-04
75-71-8	Dichlorodifluoromethane	3700	37	-	8.8E+01		8.4E-02
75-34-3	Dichloroethane, 1,1-	330	3.3	7.7E+00	-	4.3E-07	
156-59-2	Dichloroethylene, cis-1,2-	340	3.4	-	3.5E+01		1.9E-02
156-60-5	Dichloroethylene, trans-1,2-	180	1.8	-	3.5E+01		1.0E-02
75-00-3	Ethyl Chloride (Chloroethane)	1100	11	-	3.5E+03		6.3E-04
100-41-4	Ethylbenzene	3600	36	4.9E+00	8.8E+02	7.3E-06	8.2E-03
142-82-5	Heptane, N-	16000	160	-	3.5E+02		9.1E-02
110-54-3	Hexane, N-	5600	56	-	6.1E+02		1.8E-02
7783-06-4	Hydrogen Sulfide	16726	167.26	-	1.8E+00		1.9E+01
103-65-1	Propyl benzene	240	2.4	-	8.8E+02		5.5E-04
108-88-3	Toluene	160	1.6	-	4.4E+03		7.3E-05
79-01-6	Trichloroethylene	87	0.87	3.0E+00	1.8E+00	2.9E-07	9.9E-02
95-63-6	Trimethylbenzene, 1,2,4-	400	4	-	5.3E+01		1.5E-02
108-67-8	Trimethylbenzene, 1,3,5-	170	1.7	-	5.3E+01		6.5E-03
75-01-4	Vinyl Chloride	280	2.8	2.8E+00	8.8E+01	1.0E-06	6.4E-03
1330-20-7	Xylenes	18600	186	-	8.8E+01		4.2E-01

Cumulative:	3.4E-05	2.0E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-13
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-13

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
30		67-64-1	Acetone			ug/m ³	SGP-13									
20		110-82-7	Cyclohexane			ug/m ³	SGP-13									
21	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-13									
16		67-63-0	Isopropanol			ug/m ³	SGP-13									
15		127-18-4	Tetrachloroethylene			ug/m ³	SGP-13									
11		79-01-6	Trichloroethylene			ug/m ³	SGP-13									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-13

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.3E-07	1.8E-01	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.0E-08	1.4E-02	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-13

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	30	0.9	-	-		
110-82-7	Cyclohexane	20	0.6	-	1.3E+03		9.6E-05
75-71-8	Dichlorodifluoromethane	21	0.63	-	2.1E+01		6.0E-03
67-63-0	Isopropanol	16	0.48	-	4.2E+01		2.3E-03
127-18-4	Tetrachloroethylene	15	0.45	1.1E+01	8.3E+00	4.2E-08	1.1E-02
79-01-6	Trichloroethylene	11	0.33	4.8E-01	4.2E-01	6.9E-07	1.6E-01

Cumulative:	7.3E-07	1.8E-01
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-13

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	30	0.3	-	-		
110-82-7	Cyclohexane	20	0.2	-	5.3E+03		7.6E-06
75-71-8	Dichlorodifluoromethane	21	0.21	-	8.8E+01		4.8E-04
67-63-0	Isopropanol	16	0.16	-	1.8E+02		1.8E-04
127-18-4	Tetrachloroethylene	15	0.15	4.7E+01	3.5E+01	3.2E-09	8.6E-04
79-01-6	Trichloroethylene	11	0.11	3.0E+00	1.8E+00	3.7E-08	1.3E-02

Cumulative:	4.0E-08	1.4E-02
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-14
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-14

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1700		71-43-2	Benzene			ug/m ³	SGP-14									
590		108-90-7	Chlorobenzene			ug/m ³	SGP-14									
370		98-82-8	Cumene			ug/m ³	SGP-14									
2200		110-82-7	Cyclohexane			ug/m ³	SGP-14									
110		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-14									
950	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-14									
160		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-14									
630		100-41-4	Ethylbenzene			ug/m ³	SGP-14									
120		109-99-9	~Tetrahydrofuran			ug/m ³	SGP-14									
7500		142-82-5	Heptane, N-			ug/m ³	SGP-14									
2400		110-54-3	Hexane, N-			ug/m ³	SGP-14									
4,321		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-14									
240		103-65-1	Propyl benzene			ug/m ³	SGP-14									
84		108-88-3	Toluene			ug/m ³	SGP-14									
110		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-14									
98		75-01-4	Vinyl Chloride			ug/m ³	SGP-14									
1485		1330-20-7	Xylenes			ug/m ³	SGP-14									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-14

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.9E-04	6.6E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.3E-05	5.2E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-14

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1700	51	3.6E-01	6.3E+00	1.4E-04	1.6E+00
108-90-7	Chlorobenzene	590	17.7	-	1.0E+01		3.4E-01
98-82-8	Cumene	370	11.1	-	8.3E+01		2.7E-02
110-82-7	Cyclohexane	2200	66	-	1.3E+03		1.1E-02
106-46-7	Dichlorobenzene, 1,4-	110	3.3	2.6E-01	1.7E+02	1.3E-05	4.0E-03
75-71-8	Dichlorodifluoromethane	950	28.5	-	2.1E+01		2.7E-01
75-00-3	Ethyl Chloride (Chloroethane)	160	4.8	-	8.3E+02		1.2E-03
100-41-4	Ethylbenzene	630	18.9	1.1E+00	2.1E+02	1.7E-05	1.8E-02
109-99-9	~Tetrahydrofuran	120	3.6	-	4.2E+02		1.7E-03
142-82-5	Heptane, N-	7500	225	-	8.3E+01		5.4E-01
110-54-3	Hexane, N-	2400	72	-	1.5E+02		9.9E-02
7783-06-4	Hydrogen Sulfide	4321	129.63	-	4.2E-01		6.2E+01
103-65-1	Propyl benzene	240	7.2	-	2.1E+02		6.9E-03
108-88-3	Toluene	84	2.52	-	1.0E+03		4.8E-04
95-63-6	Trimethylbenzene, 1,2,4-	110	3.3	-	1.3E+01		5.3E-02
75-01-4	Vinyl Chloride	98	2.94	1.7E-01	2.1E+01	1.8E-05	2.8E-02
1330-20-7	Xylenes	1485	44.55	-	2.1E+01		4.3E-01

Cumulative:	1.9E-04	6.6E+01
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-14

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1700	17	1.6E+00	2.6E+01	1.1E-05	1.3E-01
108-90-7	Chlorobenzene	590	5.9	-	4.4E+01		2.7E-02
98-82-8	Cumene	370	3.7	-	3.5E+02		2.1E-03
110-82-7	Cyclohexane	2200	22	-	5.3E+03		8.4E-04
106-46-7	Dichlorobenzene, 1,4-	110	1.1	1.1E+00	7.0E+02	9.9E-07	3.1E-04
75-71-8	Dichlorodifluoromethane	950	9.5	-	8.8E+01		2.2E-02
75-00-3	Ethyl Chloride (Chloroethane)	160	1.6	-	3.5E+03		9.1E-05
100-41-4	Ethylbenzene	630	6.3	4.9E+00	8.8E+02	1.3E-06	1.4E-03
109-99-9	~Tetrahydrofuran	120	1.2	-	1.8E+03		1.4E-04
142-82-5	Heptane, N-	7500	75	-	3.5E+02		4.3E-02
110-54-3	Hexane, N-	2400	24	-	6.1E+02		7.8E-03
7783-06-4	Hydrogen Sulfide	4321	43.21	-	1.8E+00		4.9E+00
103-65-1	Propyl benzene	240	2.4	-	8.8E+02		5.5E-04
108-88-3	Toluene	84	0.84	-	4.4E+03		3.8E-05
95-63-6	Trimethylbenzene, 1,2,4-	110	1.1	-	5.3E+01		4.2E-03
75-01-4	Vinyl Chloride	98	0.98	2.8E+00	8.8E+01	3.5E-07	2.2E-03
1330-20-7	Xylenes	1485	14.85	-	8.8E+01		3.4E-02

Cumulative:	1.3E-05	5.2E+00
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-19
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-19

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
320		67-64-1	Acetone			ug/m ³	SGP-19									
700		71-43-2	Benzene			ug/m ³	SGP-19									
1400		108-90-7	Chlorobenzene			ug/m ³	SGP-19									
490		98-82-8	Cumene			ug/m ³	SGP-19									
2000		110-82-7	Cyclohexane			ug/m ³	SGP-19									
75		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-19									
1900	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-19									
54		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-19									
220		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-19									
550		100-41-4	Ethylbenzene			ug/m ³	SGP-19									
4900		142-82-5	Heptane, N-			ug/m ³	SGP-19									
3400		110-54-3	Hexane, N-			ug/m ³	SGP-19									
33,453		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-19									
300		103-65-1	Propyl benzene			ug/m ³	SGP-19									
880		108-88-3	Toluene			ug/m ³	SGP-19									
85		79-01-6	Trichloroethylene			ug/m ³	SGP-19									
260		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-19									
160		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-19									
53		75-01-4	Vinyl Chloride			ug/m ³	SGP-19									
2920		1330-20-7	Xylenes			ug/m ³	SGP-19									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-19

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.7E-05	4.9E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.7E-06	3.9E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-19

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	320	9.6	-	-		
71-43-2	Benzene	700	21	3.6E-01	6.3E+00	5.8E-05	6.7E-01
108-90-7	Chlorobenzene	1400	42	-	1.0E+01		8.1E-01
98-82-8	Cumene	490	14.7	-	8.3E+01		3.5E-02
110-82-7	Cyclohexane	2000	60	-	1.3E+03		9.6E-03
106-46-7	Dichlorobenzene, 1,4-	75	2.25	2.6E-01	1.7E+02	8.8E-06	2.7E-03
75-71-8	Dichlorodifluoromethane	1900	57	-	2.1E+01		5.5E-01
156-59-2	Dichloroethylene, cis-1,2-	54	1.62	-	8.3E+00		3.9E-02
75-00-3	Ethyl Chloride (Chloroethane)	220	6.6	-	8.3E+02		1.6E-03
100-41-4	Ethylbenzene	550	16.5	1.1E+00	2.1E+02	1.5E-05	1.6E-02
142-82-5	Heptane, N-	4900	147	-	8.3E+01		3.5E-01
110-54-3	Hexane, N-	3400	102	-	1.5E+02		1.4E-01
7783-06-4	Hydrogen Sulfide	33453	1003.59	-	4.2E-01		4.8E+02
103-65-1	Propyl benzene	300	9	-	2.1E+02		8.6E-03
108-88-3	Toluene	880	26.4	-	1.0E+03		5.1E-03
79-01-6	Trichloroethylene	85	2.55	4.8E-01	4.2E-01	5.3E-06	1.2E+00
95-63-6	Trimethylbenzene, 1,2,4-	260	7.8	-	1.3E+01		1.2E-01
108-67-8	Trimethylbenzene, 1,3,5-	160	4.8	-	1.3E+01		7.7E-02
75-01-4	Vinyl Chloride	53	1.59	1.7E-01	2.1E+01	9.5E-06	1.5E-02
1330-20-7	Xylenes	2920	87.6	-	2.1E+01		8.4E-01

Cumulative:	9.7E-05	4.9E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-19

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	320	3.2	-	-		
71-43-2	Benzene	700	7	1.6E+00	2.6E+01	4.5E-06	5.3E-02
108-90-7	Chlorobenzene	1400	14	-	4.4E+01		6.4E-02
98-82-8	Cumene	490	4.9	-	3.5E+02		2.8E-03
110-82-7	Cyclohexane	2000	20	-	5.3E+03		7.6E-04
106-46-7	Dichlorobenzene, 1,4-	75	0.75	1.1E+00	7.0E+02	6.7E-07	2.1E-04
75-71-8	Dichlorodifluoromethane	1900	19	-	8.8E+01		4.3E-02
156-59-2	Dichloroethylene, cis-1,2-	54	0.54	-	3.5E+01		3.1E-03
75-00-3	Ethyl Chloride (Chloroethane)	220	2.2	-	3.5E+03		1.3E-04
100-41-4	Ethylbenzene	550	5.5	4.9E+00	8.8E+02	1.1E-06	1.3E-03
142-82-5	Heptane, N-	4900	49	-	3.5E+02		2.8E-02
110-54-3	Hexane, N-	3400	34	-	6.1E+02		1.1E-02
7783-06-4	Hydrogen Sulfide	33453	334.53	-	1.8E+00		3.8E+01
103-65-1	Propyl benzene	300	3	-	8.8E+02		6.8E-04
108-88-3	Toluene	880	8.8	-	4.4E+03		4.0E-04
79-01-6	Trichloroethylene	85	0.85	3.0E+00	1.8E+00	2.8E-07	9.7E-02
95-63-6	Trimethylbenzene, 1,2,4-	260	2.6	-	5.3E+01		9.9E-03
108-67-8	Trimethylbenzene, 1,3,5-	160	1.6	-	5.3E+01		6.1E-03
75-01-4	Vinyl Chloride	53	0.53	2.8E+00	8.8E+01	1.9E-07	1.2E-03
1330-20-7	Xylenes	2920	29.2	-	8.8E+01		6.7E-02

Cumulative:	6.7E-06	3.9E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-20
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-20

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location. Location of DUP-3.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
120		67-64-1	Acetone			ug/m ³	SGP-20									
860		71-43-2	Benzene			ug/m ³	DUP-3 (SGP-20)									
910		108-90-7	Chlorobenzene			ug/m ³	DUP-3 (SGP-20)									
100		98-82-8	Cumene			ug/m ³	DUP-3 (SGP-20)									
3300		110-82-7	Cyclohexane			ug/m ³	DUP-3 (SGP-20)									
85	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	DUP-3 (SGP-20)									
35		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-20									
34		100-41-4	Ethylbenzene			ug/m ³	SGP-20									
2600		142-82-5	Heptane, N-			ug/m ³	DUP-3 (SGP-20)									
2200		110-54-3	Hexane, N-			ug/m ³	DUP-3 (SGP-20)									
34,847		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-20									
32		108-88-3	Toluene			ug/m ³	SGP-20									
100		75-01-4	Vinyl Chloride			ug/m ³	DUP-3 (SGP-20)									
114		1330-20-7	Xylenes			ug/m ³	SGP-20									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-20

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.0E-05	5.0E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.9E-06	4.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-20

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	120	3.6	-	-		
71-43-2	Benzene	860	25.8	3.6E-01	6.3E+00	7.2E-05	8.2E-01
108-90-7	Chlorobenzene	910	27.3	-	1.0E+01		5.2E-01
98-82-8	Cumene	100	3	-	8.3E+01		7.2E-03
110-82-7	Cyclohexane	3300	99	-	1.3E+03		1.6E-02
75-71-8	Dichlorodifluoromethane	85	2.55	-	2.1E+01		2.4E-02
156-59-2	Dichloroethylene, cis-1,2-	35	1.05	-	8.3E+00		2.5E-02
100-41-4	Ethylbenzene	34	1.02	1.1E+00	2.1E+02	9.1E-07	9.8E-04
142-82-5	Heptane, N-	2600	78	-	8.3E+01		1.9E-01
110-54-3	Hexane, N-	2200	66	-	1.5E+02		9.0E-02
7783-06-4	Hydrogen Sulfide	34847	1045.41	-	4.2E-01		5.0E+02
108-88-3	Toluene	32	0.96	-	1.0E+03		1.8E-04
75-01-4	Vinyl Chloride	100	3	1.7E-01	2.1E+01	1.8E-05	2.9E-02
1330-20-7	Xylenes	114	3.42	-	2.1E+01		3.3E-02

Cumulative:	9.0E-05	5.0E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-20

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	120	1.2	-	-		
71-43-2	Benzene	860	8.6	1.6E+00	2.6E+01	5.5E-06	6.5E-02
108-90-7	Chlorobenzene	910	9.1	-	4.4E+01		4.2E-02
98-82-8	Cumene	100	1	-	3.5E+02		5.7E-04
110-82-7	Cyclohexane	3300	33	-	5.3E+03		1.3E-03
75-71-8	Dichlorodifluoromethane	85	0.85	-	8.8E+01		1.9E-03
156-59-2	Dichloroethylene, cis-1,2-	35	0.35	-	3.5E+01		2.0E-03
100-41-4	Ethylbenzene	34	0.34	4.9E+00	8.8E+02	6.9E-08	7.8E-05
142-82-5	Heptane, N-	2600	26	-	3.5E+02		1.5E-02
110-54-3	Hexane, N-	2200	22	-	6.1E+02		7.2E-03
7783-06-4	Hydrogen Sulfide	34847	348.47	-	1.8E+00		4.0E+01
108-88-3	Toluene	32	0.32	-	4.4E+03		1.5E-05
75-01-4	Vinyl Chloride	100	1	2.8E+00	8.8E+01	3.6E-07	2.3E-03
1330-20-7	Xylenes	114	1.14	-	8.8E+01		2.6E-03

Cumulative:	5.9E-06	4.0E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-21
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-21

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1000		71-43-2	Benzene			ug/m ³	SGP-21									
57		108-90-7	Chlorobenzene			ug/m ³	SGP-21									
160		98-82-8	Cumene			ug/m ³	SGP-21									
7200		110-82-7	Cyclohexane			ug/m ³	SGP-21									
44		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-21									
44		100-41-4	Ethylbenzene			ug/m ³	SGP-21									
23000	E	142-82-5	Heptane, N-			ug/m ³	SGP-21									
5900		110-54-3	Hexane, N-			ug/m ³	SGP-21									
836		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-21									
68		103-65-1	Propyl benzene			ug/m ³	SGP-21									
230		108-88-3	Toluene			ug/m ³	SGP-21									
50		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-21									
80		75-01-4	Vinyl Chloride			ug/m ³	SGP-21									
220		1330-20-7	Xylenes			ug/m ³	SGP-21									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-21

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.9E-05	1.5E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.7E-06	1.2E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-21

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1000	30	3.6E-01	6.3E+00	8.3E-05	9.6E-01
108-90-7	Chlorobenzene	57	1.71	-	1.0E+01		3.3E-02
98-82-8	Cumene	160	4.8	-	8.3E+01		1.2E-02
110-82-7	Cyclohexane	7200	216	-	1.3E+03		3.5E-02
156-59-2	Dichloroethylene, cis-1,2-	44	1.32	-	8.3E+00		3.2E-02
100-41-4	Ethylbenzene	44	1.32	1.1E+00	2.1E+02	1.2E-06	1.3E-03
142-82-5	Heptane, N-	23000	690	-	8.3E+01		1.7E+00
110-54-3	Hexane, N-	5900	177	-	1.5E+02		2.4E-01
7783-06-4	Hydrogen Sulfide	836	25.08	-	4.2E-01		1.2E+01
103-65-1	Propyl benzene	68	2.04	-	2.1E+02		2.0E-03
108-88-3	Toluene	230	6.9	-	1.0E+03		1.3E-03
95-63-6	Trimethylbenzene, 1,2,4-	50	1.5	-	1.3E+01		2.4E-02
75-01-4	Vinyl Chloride	80	2.4	1.7E-01	2.1E+01	1.4E-05	2.3E-02
1330-20-7	Xylenes	220	6.6	-	2.1E+01		6.3E-02

Cumulative:	9.9E-05	1.5E+01
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-21

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1000	10	1.6E+00	2.6E+01	6.4E-06	7.6E-02
108-90-7	Chlorobenzene	57	0.57	-	4.4E+01		2.6E-03
98-82-8	Cumene	160	1.6	-	3.5E+02		9.1E-04
110-82-7	Cyclohexane	7200	72	-	5.3E+03		2.7E-03
156-59-2	Dichloroethylene, cis-1,2-	44	0.44	-	3.5E+01		2.5E-03
100-41-4	Ethylbenzene	44	0.44	4.9E+00	8.8E+02	9.0E-08	1.0E-04
142-82-5	Heptane, N-	23000	230	-	3.5E+02		1.3E-01
110-54-3	Hexane, N-	5900	59	-	6.1E+02		1.9E-02
7783-06-4	Hydrogen Sulfide	836	8.36	-	1.8E+00		9.5E-01
103-65-1	Propyl benzene	68	0.68	-	8.8E+02		1.6E-04
108-88-3	Toluene	230	2.3	-	4.4E+03		1.1E-04
95-63-6	Trimethylbenzene, 1,2,4-	50	0.5	-	5.3E+01		1.9E-03
75-01-4	Vinyl Chloride	80	0.8	2.8E+00	8.8E+01	2.9E-07	1.8E-03
1330-20-7	Xylenes	220	2.2	-	8.8E+01		5.0E-03

Cumulative:	6.7E-06	1.2E+00
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-22
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-22

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2600		71-43-2	Benzene			ug/m ³	SGP-22									
170		108-90-7	Chlorobenzene			ug/m ³	SGP-22									
370		98-82-8	Cumene			ug/m ³	SGP-22									
4000		110-82-7	Cyclohexane			ug/m ³	SGP-22									
110		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-22									
1100	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-22									
1600		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-22									
5600		100-41-4	Ethylbenzene			ug/m ³	SGP-22									
14000		142-82-5	Heptane, N-			ug/m ³	SGP-22									
2600		110-54-3	Hexane, N-			ug/m ³	SGP-22									
20,908		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-22									
410		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m ³	SGP-22									
210		103-65-1	Propyl benzene			ug/m ³	SGP-22									
52		100-42-5	Styrene			ug/m ³	SGP-22									
230		127-18-4	Tetrachloroethylene			ug/m ³	SGP-22									
3600		108-88-3	Toluene			ug/m ³	SGP-22									
81		79-01-6	Trichloroethylene			ug/m ³	SGP-22									
320		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-22									
220		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-22									
2600		75-01-4	Vinyl Chloride			ug/m ³	SGP-22									
9500		1330-20-7	Xylenes			ug/m ³	SGP-22									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-22

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	8.5E-04	3.1E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.9E-05	2.5E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-22

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2600	78	3.6E-01	6.3E+00	2.2E-04	2.5E+00
108-90-7	Chlorobenzene	170	5.1	-	1.0E+01		9.8E-02
98-82-8	Cumene	370	11.1	-	8.3E+01		2.7E-02
110-82-7	Cyclohexane	4000	120	-	1.3E+03		1.9E-02
106-46-7	Dichlorobenzene, 1,4-	110	3.3	2.6E-01	1.7E+02	1.3E-05	4.0E-03
75-71-8	Dichlorodifluoromethane	1100	33	-	2.1E+01		3.2E-01
156-59-2	Dichloroethylene, cis-1,2-	1600	48	-	8.3E+00		1.2E+00
100-41-4	Ethylbenzene	5600	168	1.1E+00	2.1E+02	1.5E-04	1.6E-01
142-82-5	Heptane, N-	14000	420	-	8.3E+01		1.0E+00
110-54-3	Hexane, N-	2600	78	-	1.5E+02		1.1E-01
7783-06-4	Hydrogen Sulfide	20908	627.24	-	4.2E-01		3.0E+02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	410	12.3	-	1.0E+03		2.4E-03
103-65-1	Propyl benzene	210	6.3	-	2.1E+02		6.0E-03
100-42-5	Styrene	52	1.56	-	2.1E+02		1.5E-03
127-18-4	Tetrachloroethylene	230	6.9	1.1E+01	8.3E+00	6.4E-07	1.7E-01
108-88-3	Toluene	3600	108	-	1.0E+03		2.1E-02
79-01-6	Trichloroethylene	81	2.43	4.8E-01	4.2E-01	5.1E-06	1.2E+00
95-63-6	Trimethylbenzene, 1,2,4-	320	9.6	-	1.3E+01		1.5E-01
108-67-8	Trimethylbenzene, 1,3,5-	220	6.6	-	1.3E+01		1.1E-01
75-01-4	Vinyl Chloride	2600	78	1.7E-01	2.1E+01	4.7E-04	7.5E-01
1330-20-7	Xylenes	9500	285	-	2.1E+01		2.7E+00

Cumulative:	8.5E-04	3.1E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-22

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2600	26	1.6E+00	2.6E+01	1.7E-05	2.0E-01
108-90-7	Chlorobenzene	170	1.7	-	4.4E+01		7.8E-03
98-82-8	Cumene	370	3.7	-	3.5E+02		2.1E-03
110-82-7	Cyclohexane	4000	40	-	5.3E+03		1.5E-03
106-46-7	Dichlorobenzene, 1,4-	110	1.1	1.1E+00	7.0E+02	9.9E-07	3.1E-04
75-71-8	Dichlorodifluoromethane	1100	11	-	8.8E+01		2.5E-02
156-59-2	Dichloroethylene, cis-1,2-	1600	16	-	3.5E+01		9.1E-02
100-41-4	Ethylbenzene	5600	56	4.9E+00	8.8E+02	1.1E-05	1.3E-02
142-82-5	Heptane, N-	14000	140	-	3.5E+02		8.0E-02
110-54-3	Hexane, N-	2600	26	-	6.1E+02		8.5E-03
7783-06-4	Hydrogen Sulfide	20908	209.08	-	1.8E+00		2.4E+01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	410	4.1	-	4.4E+03		1.9E-04
103-65-1	Propyl benzene	210	2.1	-	8.8E+02		4.8E-04
100-42-5	Styrene	52	0.52	-	8.8E+02		1.2E-04
127-18-4	Tetrachloroethylene	230	2.3	4.7E+01	3.5E+01	4.9E-08	1.3E-02
108-88-3	Toluene	3600	36	-	4.4E+03		1.6E-03
79-01-6	Trichloroethylene	81	0.81	3.0E+00	1.8E+00	2.7E-07	9.2E-02
95-63-6	Trimethylbenzene, 1,2,4-	320	3.2	-	5.3E+01		1.2E-02
108-67-8	Trimethylbenzene, 1,3,5-	220	2.2	-	5.3E+01		8.4E-03
75-01-4	Vinyl Chloride	2600	26	2.8E+00	8.8E+01	9.3E-06	5.9E-02
1330-20-7	Xylenes	9500	95	-	8.8E+01		2.2E-01

Cumulative:	3.9E-05	2.5E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-23
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-23

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
930		71-43-2	Benzene			ug/m ³	SGP-23									
180		108-90-7	Chlorobenzene			ug/m ³	SGP-23									
590		98-82-8	Cumene			ug/m ³	SGP-23									
730		110-82-7	Cyclohexane			ug/m ³	SGP-23									
4400	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-23									
440		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-23									
9900		100-41-4	Ethylbenzene			ug/m ³	SGP-23									
240		109-99-9	~Tetrahydrofuran			ug/m ³	SGP-23									
2800		142-82-5	Heptane, N-			ug/m ³	SGP-23									
830		110-54-3	Hexane, N-			ug/m ³	SGP-23									
19,514		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-23									
460		103-65-1	Propyl benzene			ug/m ³	SGP-23									
210		127-18-4	Tetrachloroethylene			ug/m ³	SGP-23									
1700		108-88-3	Toluene			ug/m ³	SGP-23									
100		79-01-6	Trichloroethylene			ug/m ³	SGP-23									
180	Freon 11	75-69-4	Trichlorofluoromethane			ug/m ³	SGP-23									
890		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGP-23									
510		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGP-23									
440		75-01-4	Vinyl Chloride			ug/m ³	SGP-23									
13960		95-47-6	Xylene, o-			ug/m ³	SGP-23									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-23

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.3E-04	2.9E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.8E-05	2.3E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-23

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	930	27.9	3.6E-01	6.3E+00	7.8E-05	8.9E-01
108-90-7	Chlorobenzene	180	5.4	-	1.0E+01		1.0E-01
98-82-8	Cumene	590	17.7	-	8.3E+01		4.2E-02
110-82-7	Cyclohexane	730	21.9	-	1.3E+03		3.5E-03
75-71-8	Dichlorodifluoromethane	4400	132	-	2.1E+01		1.3E+00
156-59-2	Dichloroethylene, cis-1,2-	440	13.2	-	8.3E+00		3.2E-01
100-41-4	Ethylbenzene	9900	297	1.1E+00	2.1E+02	2.6E-04	2.8E-01
109-99-9	~Tetrahydrofuran	240	7.2	-	4.2E+02		3.5E-03
142-82-5	Heptane, N-	2800	84	-	8.3E+01		2.0E-01
110-54-3	Hexane, N-	830	24.9	-	1.5E+02		3.4E-02
7783-06-4	Hydrogen Sulfide	19514	585.42	-	4.2E-01		2.8E+02
103-65-1	Propyl benzene	460	13.8	-	2.1E+02		1.3E-02
127-18-4	Tetrachloroethylene	210	6.3	1.1E+01	8.3E+00	5.8E-07	1.5E-01
108-88-3	Toluene	1700	51	-	1.0E+03		9.8E-03
79-01-6	Trichloroethylene	100	3	4.8E-01	4.2E-01	6.3E-06	1.4E+00
75-69-4	Trichlorofluoromethane	180	5.4	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	890	26.7	-	1.3E+01		4.3E-01
108-67-8	Trimethylbenzene, 1,3,5-	510	15.3	-	1.3E+01		2.4E-01
75-01-4	Vinyl Chloride	440	13.2	1.7E-01	2.1E+01	7.9E-05	1.3E-01
95-47-6	Xylene, o-	13960	418.8	-	2.1E+01		4.0E+00

Cumulative: **4.3E-04** **2.9E+02**

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-23

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	930	9.3	1.6E+00	2.6E+01	5.9E-06	7.1E-02
108-90-7	Chlorobenzene	180	1.8	-	4.4E+01		8.2E-03
98-82-8	Cumene	590	5.9	-	3.5E+02		3.4E-03
110-82-7	Cyclohexane	730	7.3	-	5.3E+03		2.8E-04
75-71-8	Dichlorodifluoromethane	4400	44	-	8.8E+01		1.0E-01
156-59-2	Dichloroethylene, cis-1,2-	440	4.4	-	3.5E+01		2.5E-02
100-41-4	Ethylbenzene	9900	99	4.9E+00	8.8E+02	2.0E-05	2.3E-02
109-99-9	~Tetrahydrofuran	240	2.4	-	1.8E+03		2.7E-04
142-82-5	Heptane, N-	2800	28	-	3.5E+02		1.6E-02
110-54-3	Hexane, N-	830	8.3	-	6.1E+02		2.7E-03
7783-06-4	Hydrogen Sulfide	19514	195.14	-	1.8E+00		2.2E+01
103-65-1	Propyl benzene	460	4.6	-	8.8E+02		1.1E-03
127-18-4	Tetrachloroethylene	210	2.1	4.7E+01	3.5E+01	4.5E-08	1.2E-02
108-88-3	Toluene	1700	17	-	4.4E+03		7.8E-04
79-01-6	Trichloroethylene	100	1	3.0E+00	1.8E+00	3.3E-07	1.1E-01
75-69-4	Trichlorofluoromethane	180	1.8	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	890	8.9	-	5.3E+01		3.4E-02
108-67-8	Trimethylbenzene, 1,3,5-	510	5.1	-	5.3E+01		1.9E-02
75-01-4	Vinyl Chloride	440	4.4	2.8E+00	8.8E+01	1.6E-06	1.0E-02
95-47-6	Xylene, o-	13960	139.6	-	8.8E+01		3.2E-01

Cumulative:	2.8E-05	2.3E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-24
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-24

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
950		71-43-2	Benzene			ug/m ³	SGP-24									
98		98-82-8	Cumene			ug/m ³	SGP-24									
10000		110-82-7	Cyclohexane			ug/m ³	SGP-24									
910	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-24									
680		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-24									
59		156-60-5	Dichloroethylene, trans-1,2-			ug/m ³	SGP-24									
870		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-24									
41		100-41-4	Ethylbenzene			ug/m ³	SGP-24									
15000		142-82-5	Heptane, N-			ug/m ³	SGP-24									
10000		110-54-3	Hexane, N-			ug/m ³	SGP-24									
7,806		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-24									
90		79-01-6	Trichloroethylene			ug/m ³	SGP-24									
170		75-01-4	Vinyl Chloride			ug/m ³	SGP-24									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-24

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.2E-04	1.2E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.0E-06	9.3E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-24

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	950	28.5	3.6E-01	6.3E+00	7.9E-05	9.1E-01
98-82-8	Cumene	98	2.94	-	8.3E+01		7.0E-03
110-82-7	Cyclohexane	10000	300	-	1.3E+03		4.8E-02
75-71-8	Dichlorodifluoromethane	910	27.3	-	2.1E+01		2.6E-01
156-59-2	Dichloroethylene, cis-1,2-	680	20.4	-	8.3E+00		4.9E-01
156-60-5	Dichloroethylene, trans-1,2-	59	1.77	-	8.3E+00		4.2E-02
75-00-3	Ethyl Chloride (Chloroethane)	870	26.1	-	8.3E+02		6.3E-03
100-41-4	Ethylbenzene	41	1.23	1.1E+00	2.1E+02	1.1E-06	1.2E-03
142-82-5	Heptane, N-	15000	450	-	8.3E+01		1.1E+00
110-54-3	Hexane, N-	10000	300	-	1.5E+02		4.1E-01
7783-06-4	Hydrogen Sulfide	7806	234.18	-	4.2E-01		1.1E+02
79-01-6	Trichloroethylene	90	2.7	4.8E-01	4.2E-01	5.6E-06	1.3E+00
75-01-4	Vinyl Chloride	170	5.1	1.7E-01	2.1E+01	3.0E-05	4.9E-02

Cumulative:	1.2E-04	1.2E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-24

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	950	9.5	1.6E+00	2.6E+01	6.0E-06	7.2E-02
98-82-8	Cumene	98	0.98	-	3.5E+02		5.6E-04
110-82-7	Cyclohexane	10000	100	-	5.3E+03		3.8E-03
75-71-8	Dichlorodifluoromethane	910	9.1	-	8.8E+01		2.1E-02
156-59-2	Dichloroethylene, cis-1,2-	680	6.8	-	3.5E+01		3.9E-02
156-60-5	Dichloroethylene, trans-1,2-	59	0.59	-	3.5E+01		3.4E-03
75-00-3	Ethyl Chloride (Chloroethane)	870	8.7	-	3.5E+03		5.0E-04
100-41-4	Ethylbenzene	41	0.41	4.9E+00	8.8E+02	8.4E-08	9.4E-05
142-82-5	Heptane, N-	15000	150	-	3.5E+02		8.6E-02
110-54-3	Hexane, N-	10000	100	-	6.1E+02		3.3E-02
7783-06-4	Hydrogen Sulfide	7806	78.06	-	1.8E+00		8.9E+00
79-01-6	Trichloroethylene	90	0.9	3.0E+00	1.8E+00	3.0E-07	1.0E-01
75-01-4	Vinyl Chloride	170	1.7	2.8E+00	8.8E+01	6.1E-07	3.9E-03
Cumulative:						7.0E-06	9.3E+00

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-27
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-27

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
420		71-43-2	Benzene			ug/m ³	SGP-27									
420		108-90-7	Chlorobenzene			ug/m ³	SGP-27									
340		98-82-8	Cumene			ug/m ³	SGP-27									
280		110-82-7	Cyclohexane			ug/m ³	SGP-27									
20000	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-27									
490		142-82-5	Heptane, N-			ug/m ³	SGP-27									
540		110-54-3	Hexane, N-			ug/m ³	SGP-27									
16,726		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-27									
160		103-65-1	Propyl benzene			ug/m ³	SGP-27									
640		75-01-4	Vinyl Chloride			ug/m ³	SGP-27									
190		1330-20-7	Xylenes			ug/m ³	SGP-27									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-27

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.5E-04	2.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.0E-06	2.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-27

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	420	12.6	3.6E-01	6.3E+00	3.5E-05	4.0E-01
108-90-7	Chlorobenzene	420	12.6	-	1.0E+01		2.4E-01
98-82-8	Cumene	340	10.2	-	8.3E+01		2.4E-02
110-82-7	Cyclohexane	280	8.4	-	1.3E+03		1.3E-03
75-71-8	Dichlorodifluoromethane	20000	600	-	2.1E+01		5.8E+00
142-82-5	Heptane, N-	490	14.7	-	8.3E+01		3.5E-02
110-54-3	Hexane, N-	540	16.2	-	1.5E+02		2.2E-02
7783-06-4	Hydrogen Sulfide	16726	501.78	-	4.2E-01		2.4E+02
103-65-1	Propyl benzene	160	4.8	-	2.1E+02		4.6E-03
75-01-4	Vinyl Chloride	640	19.2	1.7E-01	2.1E+01	1.1E-04	1.8E-01
1330-20-7	Xylenes	190	5.7	-	2.1E+01		5.5E-02

Cumulative:	1.5E-04	2.5E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-27

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	420	4.2	1.6E+00	2.6E+01	2.7E-06	3.2E-02
108-90-7	Chlorobenzene	420	4.2	-	4.4E+01		1.9E-02
98-82-8	Cumene	340	3.4	-	3.5E+02		1.9E-03
110-82-7	Cyclohexane	280	2.8	-	5.3E+03		1.1E-04
75-71-8	Dichlorodifluoromethane	20000	200	-	8.8E+01		4.6E-01
142-82-5	Heptane, N-	490	4.9	-	3.5E+02		2.8E-03
110-54-3	Hexane, N-	540	5.4	-	6.1E+02		1.8E-03
7783-06-4	Hydrogen Sulfide	16726	167.26	-	1.8E+00		1.9E+01
103-65-1	Propyl benzene	160	1.6	-	8.8E+02		3.7E-04
75-01-4	Vinyl Chloride	640	6.4	2.8E+00	8.8E+01	2.3E-06	1.5E-02
1330-20-7	Xylenes	190	1.9	-	8.8E+01		4.3E-03

Cumulative:	5.0E-06	2.0E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-28
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-28

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
240		71-43-2	Benzene			ug/m ³	SGP-28									
3000		108-90-7	Chlorobenzene			ug/m ³	SGP-28									
96		98-82-8	Cumene			ug/m ³	SGP-28									
120		110-82-7	Cyclohexane			ug/m ³	SGP-28									
30		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-28									
23	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-28									
38		100-41-4	Ethylbenzene			ug/m ³	SGP-28									
160		142-82-5	Heptane, N-			ug/m ³	SGP-28									
260		110-54-3	Hexane, N-			ug/m ³	SGP-28									
19,514		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-28									
30		103-65-1	Propyl benzene			ug/m ³	SGP-28									
19		100-42-5	Styrene			ug/m ³	SGP-28									
72		108-88-3	Toluene			ug/m ³	SGP-28									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-28

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.5E-05	2.8E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.9E-06	2.2E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-28

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	240	7.2	3.6E-01	6.3E+00	2.0E-05	2.3E-01
108-90-7	Chlorobenzene	3000	90	-	1.0E+01		1.7E+00
98-82-8	Cumene	96	2.88	-	8.3E+01		6.9E-03
110-82-7	Cyclohexane	120	3.6	-	1.3E+03		5.8E-04
106-46-7	Dichlorobenzene, 1,4-	30	0.9	2.6E-01	1.7E+02	3.5E-06	1.1E-03
75-71-8	Dichlorodifluoromethane	23	0.69	-	2.1E+01		6.6E-03
100-41-4	Ethylbenzene	38	1.14	1.1E+00	2.1E+02	1.0E-06	1.1E-03
142-82-5	Heptane, N-	160	4.8	-	8.3E+01		1.2E-02
110-54-3	Hexane, N-	260	7.8	-	1.5E+02		1.1E-02
7783-06-4	Hydrogen Sulfide	19514	585.42	-	4.2E-01		2.8E+02
103-65-1	Propyl benzene	30	0.9	-	2.1E+02		8.6E-04
100-42-5	Styrene	19	0.57	-	2.1E+02		5.5E-04
108-88-3	Toluene	72	2.16	-	1.0E+03		4.1E-04

Cumulative:	2.5E-05	2.8E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-28

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	240	2.4	1.6E+00	2.6E+01	1.5E-06	1.8E-02
108-90-7	Chlorobenzene	3000	30	-	4.4E+01		1.4E-01
98-82-8	Cumene	96	0.96	-	3.5E+02		5.5E-04
110-82-7	Cyclohexane	120	1.2	-	5.3E+03		4.6E-05
106-46-7	Dichlorobenzene, 1,4-	30	0.3	1.1E+00	7.0E+02	2.7E-07	8.6E-05
75-71-8	Dichlorodifluoromethane	23	0.23	-	8.8E+01		5.3E-04
100-41-4	Ethylbenzene	38	0.38	4.9E+00	8.8E+02	7.7E-08	8.7E-05
142-82-5	Heptane, N-	160	1.6	-	3.5E+02		9.1E-04
110-54-3	Hexane, N-	260	2.6	-	6.1E+02		8.5E-04
7783-06-4	Hydrogen Sulfide	19514	195.14	-	1.8E+00		2.2E+01
103-65-1	Propyl benzene	30	0.3	-	8.8E+02		6.8E-05
100-42-5	Styrene	19	0.19	-	8.8E+02		4.3E-05
108-88-3	Toluene	72	0.72	-	4.4E+03		3.3E-05

Cumulative:	1.9E-06	2.2E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGP-29
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-29

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
27		67-64-1	Acetone			ug/m ³	SGP-29									
84		71-43-2	Benzene			ug/m ³	SGP-29									
9		75-15-0	Carbon Disulfide			ug/m ³	SGP-29									
55		108-90-7	Chlorobenzene			ug/m ³	SGP-29									
17		98-82-8	Cumene			ug/m ³	SGP-29									
330		110-82-7	Cyclohexane			ug/m ³	SGP-29									
6.8		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGP-29									
25	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-29									
5.2		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGP-29									
3.6		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGP-29									
170		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGP-29									
250		142-82-5	Heptane, N-			ug/m ³	SGP-29									
830		110-54-3	Hexane, N-			ug/m ³	SGP-29									
16,726		7783-06-4	Hydrogen Sulfide			ug/m ³	SGP-29									
16		67-63-0	Isopropanol			ug/m ³	SGP-29									
14		108-88-3	Toluene			ug/m ³	SGP-29									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-29

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.9E-06	2.4E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.0E-07	1.9E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-29

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	27	0.81	-	-		
71-43-2	Benzene	84	2.52	3.6E-01	6.3E+00	7.0E-06	8.1E-02
75-15-0	Carbon Disulfide	9	0.27	-	1.5E+02		3.7E-04
108-90-7	Chlorobenzene	55	1.65	-	1.0E+01		3.2E-02
98-82-8	Cumene	17	0.51	-	8.3E+01		1.2E-03
110-82-7	Cyclohexane	330	9.9	-	1.3E+03		1.6E-03
106-46-7	Dichlorobenzene, 1,4-	6.8	0.204	2.6E-01	1.7E+02	8.0E-07	2.4E-04
75-71-8	Dichlorodifluoromethane	25	0.75	-	2.1E+01		7.2E-03
75-34-3	Dichloroethane, 1,1-	5.2	0.156	1.8E+00	-	8.9E-08	
156-59-2	Dichloroethylene, cis-1,2-	3.6	0.108	-	8.3E+00		2.6E-03
75-00-3	Ethyl Chloride (Chloroethane)	170	5.1	-	8.3E+02		1.2E-03
142-82-5	Heptane, N-	250	7.5	-	8.3E+01		1.8E-02
110-54-3	Hexane, N-	830	24.9	-	1.5E+02		3.4E-02
7783-06-4	Hydrogen Sulfide	16726	501.78	-	4.2E-01		2.4E+02
67-63-0	Isopropanol	16	0.48	-	4.2E+01		2.3E-03
108-88-3	Toluene	14	0.42	-	1.0E+03		8.1E-05

Cumulative:	7.9E-06	2.4E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGP-29

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	27	0.27	-	-		
71-43-2	Benzene	84	0.84	1.6E+00	2.6E+01	5.3E-07	6.4E-03
75-15-0	Carbon Disulfide	9	0.09	-	6.1E+02		2.9E-05
108-90-7	Chlorobenzene	55	0.55	-	4.4E+01		2.5E-03
98-82-8	Cumene	17	0.17	-	3.5E+02		9.7E-05
110-82-7	Cyclohexane	330	3.3	-	5.3E+03		1.3E-04
106-46-7	Dichlorobenzene, 1,4-	6.8	0.068	1.1E+00	7.0E+02	6.1E-08	1.9E-05
75-71-8	Dichlorodifluoromethane	25	0.25	-	8.8E+01		5.7E-04
75-34-3	Dichloroethane, 1,1-	5.2	0.052	7.7E+00	-	6.8E-09	
156-59-2	Dichloroethylene, cis-1,2-	3.6	0.036	-	3.5E+01		2.1E-04
75-00-3	Ethyl Chloride (Chloroethane)	170	1.7	-	3.5E+03		9.7E-05
142-82-5	Heptane, N-	250	2.5	-	3.5E+02		1.4E-03
110-54-3	Hexane, N-	830	8.3	-	6.1E+02		2.7E-03
7783-06-4	Hydrogen Sulfide	16726	167.26	-	1.8E+00		1.9E+01
67-63-0	Isopropanol	16	0.16	-	1.8E+02		1.8E-04
108-88-3	Toluene	14	0.14	-	4.4E+03		6.4E-06

Cumulative:	6.0E-07	1.9E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGI-6
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-6

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1200		71-43-2	Benzene			ug/m ³	SGI-6									
3600		110-82-7	Cyclohexane			ug/m ³	SGI-6									
1700	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGI-6									
74000		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-6									
5900		142-82-5	Heptane, N-			ug/m ³	SGI-6									
4200		110-54-3	Hexane, N-			ug/m ³	SGI-6									
12,684		7783-06-4	Hydrogen Sulfide			ug/m ³	SGI-6									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-6

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.0E-04	1.9E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.6E-06	1.5E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGL-6

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1200	36	3.6E-01	6.3E+00	1.0E-04	1.2E+00
110-82-7	Cyclohexane	3600	108	-	1.3E+03		1.7E-02
75-71-8	Dichlorodifluoromethane	1700	51	-	2.1E+01		4.9E-01
75-00-3	Ethyl Chloride (Chloroethane)	74000	2220	-	8.3E+02		5.3E-01
142-82-5	Heptane, N-	5900	177	-	8.3E+01		4.2E-01
110-54-3	Hexane, N-	4200	126	-	1.5E+02		1.7E-01
7783-06-4	Hydrogen Sulfide	12684	380.52	-	4.2E-01		1.8E+02

Cumulative:	1.0E-04	1.9E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-6

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1200	12	1.6E+00	2.6E+01	7.6E-06	9.1E-02
110-82-7	Cyclohexane	3600	36	-	5.3E+03		1.4E-03
75-71-8	Dichlorodifluoromethane	1700	17	-	8.8E+01		3.9E-02
75-00-3	Ethyl Chloride (Chloroethane)	74000	740	-	3.5E+03		4.2E-02
142-82-5	Heptane, N-	5900	59	-	3.5E+02		3.4E-02
110-54-3	Hexane, N-	4200	42	-	6.1E+02		1.4E-02
7783-06-4	Hydrogen Sulfide	12684	126.84	-	1.8E+00		1.4E+01

Cumulative:	7.6E-06	1.5E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGI-12
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-12

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1600		67-64-1	Acetone			ug/m ³	SGI-12									
2200		71-43-2	Benzene			ug/m ³	SGI-12									
1200		108-90-7	Chlorobenzene			ug/m ³	SGI-12									
900		110-82-7	Cyclohexane			ug/m ³	SGI-12									
51		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	SGI-12									
950	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGP-12									
140		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-12									
300		100-41-4	Ethylbenzene			ug/m ³	SGI-12									
1500		142-82-5	Heptane, N-			ug/m ³	SGI-12									
1400		110-54-3	Hexane, N-			ug/m ³	SGI-12									
32,059		7783-06-4	Hydrogen Sulfide			ug/m ³	SGI-12									
110		67-63-0	Isopropanol			ug/m ³	SGI-12									
160		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m ³	SGI-12									
350		103-65-1	Propyl benzene			ug/m ³	SGI-12									
79		127-18-4	Tetrachloroethylene			ug/m ³	SGI-12									
1500		108-88-3	Toluene			ug/m ³	SGI-12									
140		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGI-12									
86		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGI-12									
75		75-01-4	Vinyl Chloride			ug/m ³	SGI-12									
900		1330-20-7	Xylenes			ug/m ³	SGI-12									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-12

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.1E-04	4.6E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.5E-05	3.7E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

- Notes:
1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
 2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
 3. NM = Not modeled, required contaminant migration parameters were not entered.
 4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-12

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	1600	48	-	-		
71-43-2	Benzene	2200	66	3.6E-01	6.3E+00	1.8E-04	2.1E+00
108-90-7	Chlorobenzene	1200	36	-	1.0E+01		6.9E-01
110-82-7	Cyclohexane	900	27	-	1.3E+03		4.3E-03
106-46-7	Dichlorobenzene, 1,4-	51	1.53	2.6E-01	1.7E+02	6.0E-06	1.8E-03
75-71-8	Dichlorodifluoromethane	950	28.5	-	2.1E+01		2.7E-01
75-00-3	Ethyl Chloride (Chloroethane)	140	4.2	-	8.3E+02		1.0E-03
100-41-4	Ethylbenzene	300	9	1.1E+00	2.1E+02	8.0E-06	8.6E-03
142-82-5	Heptane, N-	1500	45	-	8.3E+01		1.1E-01
110-54-3	Hexane, N-	1400	42	-	1.5E+02		5.8E-02
7783-06-4	Hydrogen Sulfide	32059	961.77	-	4.2E-01		4.6E+02
67-63-0	Isopropanol	110	3.3	-	4.2E+01		1.6E-02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	160	4.8	-	1.0E+03		9.2E-04
103-65-1	Propyl benzene	350	10.5	-	2.1E+02		1.0E-02
127-18-4	Tetrachloroethylene	79	2.37	1.1E+01	8.3E+00	2.2E-07	5.7E-02
108-88-3	Toluene	1500	45	-	1.0E+03		8.6E-03
95-63-6	Trimethylbenzene, 1,2,4-	140	4.2	-	1.3E+01		6.7E-02
108-67-8	Trimethylbenzene, 1,3,5-	86	2.58	-	1.3E+01		4.1E-02
75-01-4	Vinyl Chloride	75	2.25	1.7E-01	2.1E+01	1.3E-05	2.2E-02
1330-20-7	Xylenes	900	27	-	2.1E+01		2.6E-01

Cumulative: **2.1E-04** **4.6E+02**

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-12

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	1600	16	-	-		
71-43-2	Benzene	2200	22	1.6E+00	2.6E+01	1.4E-05	1.7E-01
108-90-7	Chlorobenzene	1200	12	-	4.4E+01		5.5E-02
110-82-7	Cyclohexane	900	9	-	5.3E+03		3.4E-04
106-46-7	Dichlorobenzene, 1,4-	51	0.51	1.1E+00	7.0E+02	4.6E-07	1.5E-04
75-71-8	Dichlorodifluoromethane	950	9.5	-	8.8E+01		2.2E-02
75-00-3	Ethyl Chloride (Chloroethane)	140	1.4	-	3.5E+03		8.0E-05
100-41-4	Ethylbenzene	300	3	4.9E+00	8.8E+02	6.1E-07	6.8E-04
142-82-5	Heptane, N-	1500	15	-	3.5E+02		8.6E-03
110-54-3	Hexane, N-	1400	14	-	6.1E+02		4.6E-03
7783-06-4	Hydrogen Sulfide	32059	320.59	-	1.8E+00		3.7E+01
67-63-0	Isopropanol	110	1.1	-	1.8E+02		1.3E-03
78-93-3	Methyl Ethyl Ketone (2-Butanone)	160	1.6	-	4.4E+03		7.3E-05
103-65-1	Propyl benzene	350	3.5	-	8.8E+02		8.0E-04
127-18-4	Tetrachloroethylene	79	0.79	4.7E+01	3.5E+01	1.7E-08	4.5E-03
108-88-3	Toluene	1500	15	-	4.4E+03		6.8E-04
95-63-6	Trimethylbenzene, 1,2,4-	140	1.4	-	5.3E+01		5.3E-03
108-67-8	Trimethylbenzene, 1,3,5-	86	0.86	-	5.3E+01		3.3E-03
75-01-4	Vinyl Chloride	75	0.75	2.8E+00	8.8E+01	2.7E-07	1.7E-03
1330-20-7	Xylenes	900	9	-	8.8E+01		2.1E-02

Cumulative:	1.5E-05	3.7E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGI-18
Submittal Date:	10/31/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-18

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
120		67-64-1	Acetone			ug/m ³	SGI-18									
590		71-43-2	Benzene			ug/m ³	SGI-18									
230		108-90-7	Chlorobenzene			ug/m ³	SGI-18									
700		110-82-7	Cyclohexane			ug/m ³	SGI-18									
500	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGI-18									
40		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGI-18									
49		156-59-2	Dichloroethylene, cis-1,2-			ug/m ³	SGI-18									
130		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-18									
2600		100-41-4	Ethylbenzene			ug/m ³	SGI-18									
2400		142-82-5	Heptane, N-			ug/m ³	SGI-18									
1600		110-54-3	Hexane, N-			ug/m ³	SGI-18									
27,877		7783-06-4	Hydrogen Sulfide			ug/m ³	SGI-18									
240		103-65-1	Propyl benzene			ug/m ³	SGI-18									
210		108-88-3	Toluene			ug/m ³	SGI-18									
52		79-01-6	Trichloroethylene			ug/m ³	SGI-18									
420		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGI-18									
290		108-67-8	Trimethylbenzene, 1,3,5-			ug/m ³	SGI-18									
88		75-01-4	Vinyl Chloride			ug/m ³	SGI-18									
4930		1330-20-7	Xylenes			ug/m ³	SGI-18									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-18

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.4E-04	4.0E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.6E-06	3.2E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-18

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	120	3.6	-	-		
71-43-2	Benzene	590	17.7	3.6E-01	6.3E+00	4.9E-05	5.7E-01
108-90-7	Chlorobenzene	230	6.9	-	1.0E+01		1.3E-01
110-82-7	Cyclohexane	700	21	-	1.3E+03		3.4E-03
75-71-8	Dichlorodifluoromethane	500	15	-	2.1E+01		1.4E-01
75-34-3	Dichloroethane, 1,1-	40	1.2	1.8E+00	-	6.8E-07	
156-59-2	Dichloroethylene, cis-1,2-	49	1.47	-	8.3E+00		3.5E-02
75-00-3	Ethyl Chloride (Chloroethane)	130	3.9	-	8.3E+02		9.3E-04
100-41-4	Ethylbenzene	2600	78	1.1E+00	2.1E+02	6.9E-05	7.5E-02
142-82-5	Heptane, N-	2400	72	-	8.3E+01		1.7E-01
110-54-3	Hexane, N-	1600	48	-	1.5E+02		6.6E-02
7783-06-4	Hydrogen Sulfide	27877	836.31	-	4.2E-01		4.0E+02
103-65-1	Propyl benzene	240	7.2	-	2.1E+02		6.9E-03
108-88-3	Toluene	210	6.3	-	1.0E+03		1.2E-03
79-01-6	Trichloroethylene	52	1.56	4.8E-01	4.2E-01	3.3E-06	7.5E-01
95-63-6	Trimethylbenzene, 1,2,4-	420	12.6	-	1.3E+01		2.0E-01
108-67-8	Trimethylbenzene, 1,3,5-	290	8.7	-	1.3E+01		1.4E-01
75-01-4	Vinyl Chloride	88	2.64	1.7E-01	2.1E+01	1.6E-05	2.5E-02
1330-20-7	Xylenes	4930	147.9	-	2.1E+01		1.4E+00

Cumulative:	1.4E-04	4.0E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-18

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	120	1.2	-	-		
71-43-2	Benzene	590	5.9	1.6E+00	2.6E+01	3.8E-06	4.5E-02
108-90-7	Chlorobenzene	230	2.3	-	4.4E+01		1.1E-02
110-82-7	Cyclohexane	700	7	-	5.3E+03		2.7E-04
75-71-8	Dichlorodifluoromethane	500	5	-	8.8E+01		1.1E-02
75-34-3	Dichloroethane, 1,1-	40	0.4	7.7E+00	-	5.2E-08	
156-59-2	Dichloroethylene, cis-1,2-	49	0.49	-	3.5E+01		2.8E-03
75-00-3	Ethyl Chloride (Chloroethane)	130	1.3	-	3.5E+03		7.4E-05
100-41-4	Ethylbenzene	2600	26	4.9E+00	8.8E+02	5.3E-06	5.9E-03
142-82-5	Heptane, N-	2400	24	-	3.5E+02		1.4E-02
110-54-3	Hexane, N-	1600	16	-	6.1E+02		5.2E-03
7783-06-4	Hydrogen Sulfide	27877	278.77	-	1.8E+00		3.2E+01
103-65-1	Propyl benzene	240	2.4	-	8.8E+02		5.5E-04
108-88-3	Toluene	210	2.1	-	4.4E+03		9.6E-05
79-01-6	Trichloroethylene	52	0.52	3.0E+00	1.8E+00	1.7E-07	5.9E-02
95-63-6	Trimethylbenzene, 1,2,4-	420	4.2	-	5.3E+01		1.6E-02
108-67-8	Trimethylbenzene, 1,3,5-	290	2.9	-	5.3E+01		1.1E-02
75-01-4	Vinyl Chloride	88	0.88	2.8E+00	8.8E+01	3.2E-07	2.0E-03
1330-20-7	Xylenes	4930	49.3	-	8.8E+01		1.1E-01

Cumulative:	9.6E-06	3.2E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGI-25
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-25

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location. Location of DUP-4

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
190		67-64-1	Acetone			ug/m ³	SGI-25									
770		71-43-2	Benzene			ug/m ³	DUP-4 (SGI-25)									
3700		108-90-7	Chlorobenzene			ug/m ³	DUP-4 (SGI-25)									
860		98-82-8	Cumene			ug/m ³	DUP-4 (SGI-25)									
870		110-82-7	Cyclohexane			ug/m ³	DUP-4 (SGI-25)									
270		106-46-7	Dichlorobenzene, 1,4-			ug/m ³	DUP-4 (SGI-25)									
50	Freon 12	75-71-8	Dichlorodifluoromethane			ug/m ³	SGI-25									
38		75-34-3	Dichloroethane, 1,1-			ug/m ³	SGI-25									
140		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-25									
120		100-41-4	Ethylbenzene			ug/m ³	DUP-4 (SGI-25)									
5400		142-82-5	Heptane, N-			ug/m ³	DUP-4 (SGI-25)									
2000		110-54-3	Hexane, N-			ug/m ³	DUP-4 (SGI-25)									
32,059		7783-06-4	Hydrogen Sulfide			ug/m ³	SGI-25									
360		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m ³	SGI-25									
670		103-65-1	Propyl benzene			ug/m ³	DUP-4 (SGI-25)									
110		108-88-3	Toluene			ug/m ³	DUP-4 (SGI-25)									
1300		79-00-5	Trichloroethane, 1,1,2-			ug/m ³	SGI-25									
79		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	DUP-4 (SGI-25)									
68		75-01-4	Vinyl Chloride			ug/m ³	SGI-25									
450		1330-20-7	Xylenes			ug/m ³	DUP-4 (SGI-25)									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-25

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.3E-04	6.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.5E-05	5.2E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-25

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	190	5.7	-	-		
71-43-2	Benzene	770	23.1	3.6E-01	6.3E+00	6.4E-05	7.4E-01
108-90-7	Chlorobenzene	3700	111	-	1.0E+01		2.1E+00
98-82-8	Cumene	860	25.8	-	8.3E+01		6.2E-02
110-82-7	Cyclohexane	870	26.1	-	1.3E+03		4.2E-03
106-46-7	Dichlorobenzene, 1,4-	270	8.1	2.6E-01	1.7E+02	3.2E-05	9.7E-03
75-71-8	Dichlorodifluoromethane	50	1.5	-	2.1E+01		1.4E-02
75-34-3	Dichloroethane, 1,1-	38	1.14	1.8E+00	-	6.5E-07	
75-00-3	Ethyl Chloride (Chloroethane)	140	4.2	-	8.3E+02		1.0E-03
100-41-4	Ethylbenzene	120	3.6	1.1E+00	2.1E+02	3.2E-06	3.5E-03
142-82-5	Heptane, N-	5400	162	-	8.3E+01		3.9E-01
110-54-3	Hexane, N-	2000	60	-	1.5E+02		8.2E-02
7783-06-4	Hydrogen Sulfide	32059	961.77	-	4.2E-01		4.6E+02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	360	10.8	-	1.0E+03		2.1E-03
103-65-1	Propyl benzene	670	20.1	-	2.1E+02		1.9E-02
108-88-3	Toluene	110	3.3	-	1.0E+03		6.3E-04
79-00-5	Trichloroethane, 1,1,2-	1300	39	1.8E-01	4.2E-02	2.2E-04	1.9E+02
95-63-6	Trimethylbenzene, 1,2,4-	79	2.37	-	1.3E+01		3.8E-02
75-01-4	Vinyl Chloride	68	2.04	1.7E-01	2.1E+01	1.2E-05	2.0E-02
1330-20-7	Xylenes	450	13.5	-	2.1E+01		1.3E-01

Cumulative: **3.3E-04** **6.5E+02**

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-25

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	190	1.9	-	-		
71-43-2	Benzene	770	7.7	1.6E+00	2.6E+01	4.9E-06	5.9E-02
108-90-7	Chlorobenzene	3700	37	-	4.4E+01		1.7E-01
98-82-8	Cumene	860	8.6	-	3.5E+02		4.9E-03
110-82-7	Cyclohexane	870	8.7	-	5.3E+03		3.3E-04
106-46-7	Dichlorobenzene, 1,4-	270	2.7	1.1E+00	7.0E+02	2.4E-06	7.7E-04
75-71-8	Dichlorodifluoromethane	50	0.5	-	8.8E+01		1.1E-03
75-34-3	Dichloroethane, 1,1-	38	0.38	7.7E+00	-	5.0E-08	
75-00-3	Ethyl Chloride (Chloroethane)	140	1.4	-	3.5E+03		8.0E-05
100-41-4	Ethylbenzene	120	1.2	4.9E+00	8.8E+02	2.4E-07	2.7E-04
142-82-5	Heptane, N-	5400	54	-	3.5E+02		3.1E-02
110-54-3	Hexane, N-	2000	20	-	6.1E+02		6.5E-03
7783-06-4	Hydrogen Sulfide	32059	320.59	-	1.8E+00		3.7E+01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	360	3.6	-	4.4E+03		1.6E-04
103-65-1	Propyl benzene	670	6.7	-	8.8E+02		1.5E-03
108-88-3	Toluene	110	1.1	-	4.4E+03		5.0E-05
79-00-5	Trichloroethane, 1,1,2-	1300	13	7.7E-01	1.8E-01	1.7E-05	1.5E+01
95-63-6	Trimethylbenzene, 1,2,4-	79	0.79	-	5.3E+01		3.0E-03
75-01-4	Vinyl Chloride	68	0.68	2.8E+00	8.8E+01	2.4E-07	1.6E-03
1330-20-7	Xylenes	450	4.5	-	8.8E+01		1.0E-02

Cumulative:	2.5E-05	5.2E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	LFG Assessment SGI-26
Submittal Date:	11/1/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-26

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

All concentrations detected above the laboratory detection limit were input into the risk calculator at this sampling location.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/m ³)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
580		71-43-2	Benzene			ug/m ³	SGI-26									
540		108-90-7	Chlorobenzene			ug/m ³	SGI-26									
480		98-82-8	Cumene			ug/m ³	SGI-26									
660		110-82-7	Cyclohexane			ug/m ³	SGI-26									
240		75-00-3	Ethyl Chloride (Chloroethane)			ug/m ³	SGI-26									
140		100-41-4	Ethylbenzene			ug/m ³	SGI-26									
330		142-82-5	Heptane, N-			ug/m ³	SGI-26									
1600		110-54-3	Hexane, N-			ug/m ³	SGI-26									
65,512		7783-06-4	Hydrogen Sulfide			ug/m ³	SGI-26									
360		103-65-1	Propyl benzene			ug/m ³	SGI-26									
64		108-88-3	Toluene			ug/m ³	SGI-26									
300		79-00-5	Trichloroethane, 1,1,2-			ug/m ³	SGI-26									
110		95-63-6	Trimethylbenzene, 1,2,4-			ug/m ³	SGI-26									
76		75-01-4	Vinyl Chloride			ug/m ³	SGI-26									
384		1330-20-7	Xylenes			ug/m ³	SGI-26									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-26

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.2E-04	9.9E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	8.2E-06	7.8E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-26

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	580	17.4	3.6E-01	6.3E+00	4.8E-05	5.6E-01
108-90-7	Chlorobenzene	540	16.2	-	1.0E+01		3.1E-01
98-82-8	Cumene	480	14.4	-	8.3E+01		3.5E-02
110-82-7	Cyclohexane	660	19.8	-	1.3E+03		3.2E-03
75-00-3	Ethyl Chloride (Chloroethane)	240	7.2	-	8.3E+02		1.7E-03
100-41-4	Ethylbenzene	140	4.2	1.1E+00	2.1E+02	3.7E-06	4.0E-03
142-82-5	Heptane, N-	330	9.9	-	8.3E+01		2.4E-02
110-54-3	Hexane, N-	1600	48	-	1.5E+02		6.6E-02
7783-06-4	Hydrogen Sulfide	65512	1965.36	-	4.2E-01		9.4E+02
103-65-1	Propyl benzene	360	10.8	-	2.1E+02		1.0E-02
108-88-3	Toluene	64	1.92	-	1.0E+03		3.7E-04
79-00-5	Trichloroethane, 1,1,2-	300	9	1.8E-01	4.2E-02	5.1E-05	4.3E+01
95-63-6	Trimethylbenzene, 1,2,4-	110	3.3	-	1.3E+01		5.3E-02
75-01-4	Vinyl Chloride	76	2.28	1.7E-01	2.1E+01	1.4E-05	2.2E-02
1330-20-7	Xylenes	384	11.52	-	2.1E+01		1.1E-01

Cumulative:	1.2E-04	9.9E+02
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Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: LFG Assessment SGI-26

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m³

CAS #	Chemical Name:	Soil Gas Concentration (ug/m ³)	Calculated Indoor Air Concentration (ug/m ³)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	580	5.8	1.6E+00	2.6E+01	3.7E-06	4.4E-02
108-90-7	Chlorobenzene	540	5.4	-	4.4E+01		2.5E-02
98-82-8	Cumene	480	4.8	-	3.5E+02		2.7E-03
110-82-7	Cyclohexane	660	6.6	-	5.3E+03		2.5E-04
75-00-3	Ethyl Chloride (Chloroethane)	240	2.4	-	3.5E+03		1.4E-04
100-41-4	Ethylbenzene	140	1.4	4.9E+00	8.8E+02	2.9E-07	3.2E-04
142-82-5	Heptane, N-	330	3.3	-	3.5E+02		1.9E-03
110-54-3	Hexane, N-	1600	16	-	6.1E+02		5.2E-03
7783-06-4	Hydrogen Sulfide	65512	655.12	-	1.8E+00		7.5E+01
103-65-1	Propyl benzene	360	3.6	-	8.8E+02		8.2E-04
108-88-3	Toluene	64	0.64	-	4.4E+03		2.9E-05
79-00-5	Trichloroethane, 1,1,2-	300	3	7.7E-01	1.8E-01	3.9E-06	3.4E+00
95-63-6	Trimethylbenzene, 1,2,4-	110	1.1	-	5.3E+01		4.2E-03
75-01-4	Vinyl Chloride	76	0.76	2.8E+00	8.8E+01	2.7E-07	1.7E-03
1330-20-7	Xylenes	384	3.84	-	8.8E+01		8.8E-03

Cumulative:	8.2E-06	7.8E+01
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North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-1
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-1

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator.

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
87800		7664-41-7	Ammonia			ug/L	MW-1									
44.4		7440-38-2	Arsenic, Inorganic			ug/L	MW-1									
15.9		7440-39-3	Barium			ug/L	MW-1									
2.69		71-43-2	Benzene			ug/L	MW-1									
7.63	J	105-60-2	Caprolactam			ug/L	MW-1									
2.56		108-90-7	Chlorobenzene			ug/L	MW-1									
4.5	J	16065-83-1b	Chromium(III) (Soluble Compounds)			ug/L	MW-1									
0.431	J	7440-48-4	Cobalt			ug/L	MW-1									
1.07	J	7440-50-8	Copper			ug/L	MW-1									
4.66		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-1									
0.99	J	75-34-3	Dichloroethane, 1,1-			ug/L	MW-1									
10.4		123-91-1	Dioxane, 1,4-			ug/L	MW-1									
1.56		7439-92-1	~Lead and Compounds			ug/L	MW-1									
19.4		7439-96-5	Manganese (Non-diet)			ug/L	MW-1									
1.67	J	7440-02-0	Nickel Soluble Salts			ug/L	MW-1									
110.5		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-1									
5.26		7440-62-2	Vanadium and Compounds			ug/L	MW-1									
10.2		7440-66-6	Zinc and Compounds			ug/L	MW-1									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-1

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	9.0E-04	9.2E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	1.8E-04	2.1E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-1

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	87800	87800	87800								
7440-38-2	Arsenic, Inorganic	44.4	44.4	44.4	8.5E-04	4.6E-06		8.6E-04	7.4E+00	3.3E-02	8.4E+01	8.4E+01
7440-39-3	Barium	15.9	15.9	15.9					4.0E-03	2.5E-04		4.2E-03
71-43-2	Benzene	2.69	2.69	2.69	1.9E-06	2.7E-07	3.7E-06	5.9E-06	3.4E-02	4.4E-03	4.3E-02	8.1E-02
105-60-2	Caprolactam	7.63	7.63	7.63					7.6E-04	8.5E-06		7.7E-04
108-90-7	Chlorobenzene	2.56	2.56	2.56					6.4E-03	2.0E-03	2.5E-02	3.3E-02
16065-83-1b	Chromium(III) (Soluble Compounds)	4.5	4.5	4.5								
7440-48-4	Cobalt	0.431	0.431	0.431					7.2E-02	1.3E-04		7.2E-02
7440-50-8	Copper	1.07	1.07	1.07					1.3E-03	5.9E-06		1.3E-03
106-46-7	Dichlorobenzene, 1,4-	4.66	4.66	4.66	3.2E-07	2.2E-07	9.1E-06	9.7E-06	3.3E-03	2.1E-03	2.8E-03	8.2E-03
75-34-3	Dichloroethane, 1,1-	0.99	0.99	0.99	7.2E-08	5.4E-09	2.8E-07	3.6E-07	2.5E-04	1.7E-05		2.6E-04
123-91-1	Dioxane, 1,4-	10.4	10.4	10.4	1.3E-05	4.6E-08	9.3E-06	2.3E-05	1.7E-02	5.4E-05	1.7E-01	1.8E-01
7439-92-1	-Lead and Compounds	1.56	1.56	1.56					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	19.4	19.4	19.4					4.0E-02	4.4E-03		4.5E-02
7440-02-0	Nickel Soluble Salts	1.67	1.67	1.67					4.2E-03	9.2E-05		4.3E-03
14797-55-8	Nitrate (measured as nitrogen)	110.5	110.5	110.5					3.4E-03	1.5E-05		3.5E-03
7440-62-2	Vanadium and Compounds	5.26	5.26	5.26					5.2E-02	8.8E-03		6.1E-02
7440-66-6	Zinc and Compounds	10.2	10.2	10.2					1.7E-03	4.5E-06		1.7E-03

Cumulative:

9.0E-04

9.2E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-1

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	87800	87800	87800								2.0E+01
7440-38-2	Arsenic, Inorganic	44.4	44.4	44.4	1.7E-04	2.7E-06		1.7E-04	1.1E+00	1.7E-02		1.1E+00
7440-39-3	Barium	15.9	15.9	15.9					5.6E-04	1.3E-04		6.9E-04
71-43-2	Benzene	2.69	2.69	2.69	3.8E-07	1.6E-07	8.6E-07	1.4E-06	4.8E-03	2.0E-03	1.0E-02	1.7E-02
105-60-2	Caprolactam	7.63	7.63	7.63					1.1E-04	3.9E-06		1.1E-04
108-90-7	Chlorobenzene	2.56	2.56	2.56					9.1E-04	9.2E-04	5.8E-03	7.7E-03
16065-83-1b	Chromium(III) (Soluble Compounds)	4.5	4.5	4.5								
7440-48-4	Cobalt	0.431	0.431	0.431					1.0E-02	6.5E-05		1.0E-02
7440-50-8	Copper	1.07	1.07	1.07					1.9E-04	3.0E-06		1.9E-04
106-46-7	Dichlorobenzene, 1,4-	4.66	4.66	4.66	6.4E-08	1.3E-07	2.1E-06	2.3E-06	4.7E-04	9.6E-04	6.6E-04	2.1E-03
75-34-3	Dichloroethane, 1,1-	0.99	0.99	0.99	1.4E-08	3.2E-09	6.5E-08	8.2E-08	3.5E-05	7.8E-06		4.3E-05
123-91-1	Dioxane, 1,4-	10.4	10.4	10.4	2.6E-06	2.7E-08	2.1E-06	4.8E-06	2.5E-03	2.5E-05	4.0E-02	4.2E-02
7439-92-1	-Lead and Compounds	1.56	1.56	1.56					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	19.4	19.4	19.4					5.7E-03	2.3E-03		8.0E-03
7440-02-0	Nickel Soluble Salts	1.67	1.67	1.67					5.9E-04	4.7E-05		6.4E-04
14797-55-8	Nitrate (measured as nitrogen)	110.5	110.5	110.5					4.9E-04	7.8E-06		5.0E-04
7440-62-2	Vanadium and Compounds	5.26	5.26	5.26					7.4E-03	4.5E-03		1.2E-02
7440-66-6	Zinc and Compounds	10.2	10.2	10.2					2.4E-04	2.3E-06		2.4E-04

Cumulative: **1.8E-04** **2.1E+01**

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-3
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-3

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator. Location of DUP-1

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
11.6	J*	67-64-1	Acetone			ug/L	DUP-1 (MW-3)									
280000		7664-41-7	Ammonia			ug/L	MW-3									
2.25	J	7440-38-2	Arsenic, Inorganic			ug/L	MW-3									
103		7440-39-3	Barium			ug/L	DUP-1 (MW-3)									
13.2		71-43-2	Benzene			ug/L	DUP-1 (MW-3)									
0.265	J	7440-43-9	Cadmium (Water)			ug/L	MW-3									
9.6		108-90-7	Chlorobenzene			ug/L	DUP-1 (MW-3)									
7.36		16065-83-1b	Chromium(III) (Soluble Compounds)			ug/L	MW-3									
6.14		7440-48-4	Cobalt			ug/L	MW-3									
3.96		7440-50-8	Copper			ug/L	DUP-1 (MW-3)									
1.64	Isopropylbenzene	98-82-8	Cumene			ug/L	DUP-1 (MW-3)									
4.65		106-46-7	Dichlorobenzene, 1,4-			ug/L	DUP-1 (MW-3)									
0.95	J	156-59-2	Dichloroethylene, cis-1,2-			ug/L	DUP-1 (MW-3)									
34.2		123-91-1	Dioxane, 1,4-			ug/L	DUP-1 (MW-3)									
6.51		100-41-4	Ethylbenzene			ug/L	MW-3									
0.86	J	142-82-5	Heptane, N-			ug/L	DUP-1 (MW-3)									
12.3		7439-92-1	~Lead and Compounds			ug/L	MW-3									
43.2		7439-96-5	Manganese (Non-diet)			ug/L	MW-3									
2.16	J	108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)			ug/L	MW-3									
0.281	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	DUP-1 (MW-3)									
18.6		7440-02-0	Nickel Soluble Salts			ug/L	MW-3									
133		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-3									
8.54	J	84-74-2	~Dibutyl Phthalate			ug/L	DUP-1 (MW-3)									
30.5		84-66-2	~Diethyl Phthalate			ug/L	DUP-1 (MW-3)									
59.8		91-20-3	~Naphthalene			ug/L	DUP-1 (MW-3)									
1.44		103-65-1	Propyl benzene			ug/L	MW-3									
5.99		108-88-3	Toluene			ug/L	MW-3									
3.51		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-3									
1.6		108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-3									
2.81		7440-62-2	Vanadium and Compounds			ug/L	MW-3									
30.3		1330-20-7	Xylenes			ug/L	DUP-1 (MW-3)									
45.4		7440-66-6	Zinc and Compounds			ug/L	DUP-1 (MW-3)									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-3

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	6.7E-04	2.8E+02	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	1.7E-04	6.7E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-3

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	11.6	11.6	11.6					6.4E-04	2.6E-06		6.5E-04
7664-41-7	Ammonia	280000	280000	280000								2.7E+02
7440-38-2	Arsenic, Inorganic	2.25	2.25	2.25	4.3E-05	2.3E-07		4.4E-05	3.7E-01	1.6E-03		3.8E-01
7440-39-3	Barium	103	103	103					2.6E-02	1.6E-03		2.7E-02
71-43-2	Benzene	13.2	13.2	13.2	9.3E-06	1.3E-06	1.8E-05	2.9E-05	1.6E-01	2.2E-02	2.1E-01	4.0E-01
7440-43-9	Cadmium (Water)	0.265	0.265	0.265					1.3E-01	1.2E-02		1.4E-01
108-90-7	Chlorobenzene	9.6	9.6	9.6					2.4E-02	7.5E-03	9.2E-02	1.2E-01
16065-83-1b	Chromium(III) (Soluble Compounds)	7.36	7.36	7.36								
7440-48-4	Cobalt	6.14	6.14	6.14					1.0E+00	1.8E-03		1.0E+00
7440-50-8	Copper	3.96	3.96	3.96					4.9E-03	2.2E-05		5.0E-03
98-82-8	Cumene	1.64	1.64	1.64					8.2E-04	8.6E-04	2.0E-03	3.6E-03
106-46-7	Dichlorobenzene, 1,4-	4.65	4.65	4.65	3.2E-07	2.2E-07	9.1E-06	9.7E-06	3.3E-03	2.1E-03	2.8E-03	8.2E-03
156-59-2	Dichloroethylene, cis-1,2-	0.95	0.95	0.95					2.4E-02	2.6E-03	1.1E-02	3.8E-02
123-91-1	Dioxane, 1,4-	34.2	34.2	34.2	4.4E-05	1.5E-07	3.0E-05	7.5E-05	5.7E-02	1.8E-04	5.5E-01	6.0E-01
100-41-4	Ethylbenzene	6.51	6.51	6.51	9.2E-07	5.3E-07	2.9E-06	4.3E-06	6.5E-03	3.4E-03	3.1E-03	1.3E-02
142-82-5	Heptane, N-	0.86	0.86	0.86					1.4E-01		1.0E-03	1.4E-01
7439-92-1	~Lead and Compounds	12.3	12.3	12.3					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	43.2	43.2	43.2					9.0E-02	9.9E-03		1.0E-01
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	2.16	2.16	2.16							3.5E-04	3.5E-04
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.281	0.281	0.281	6.5E-09	1.4E-10	1.3E-08	2.0E-08			4.5E-05	4.5E-05
7440-02-0	Nickel Soluble Salts	18.6	18.6	18.6					4.6E-02	1.0E-03		4.7E-02
14797-55-8	Nitrate (measured as nitrogen)	133	133	133					4.1E-03	1.8E-05		4.2E-03
84-74-2	~Dibutyl Phthalate	8.54	8.54	8.54					4.3E-03	5.2E-03		9.5E-03
84-66-2	~Diethyl Phthalate	30.5	30.5	30.5					1.9E-03	1.5E-04		2.1E-03
91-20-3	~Naphthalene	59.8	59.8	59.8	9.2E-05	5.7E-05	3.6E-04	5.1E-04	1.5E-01	8.5E-02	9.6E+00	9.8E+00
103-65-1	Propyl benzene	1.44	1.44	1.44					7.2E-04	7.9E-04	6.9E-04	2.2E-03
108-88-3	Toluene	5.99	5.99	5.99					3.7E-03	1.1E-03	5.7E-04	5.4E-03
95-63-6	Trimethylbenzene, 1,2,4-	3.51	3.51	3.51					1.8E-02	1.7E-02	2.8E-02	6.3E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.6	1.6	1.6					8.0E-03	5.8E-03	1.3E-02	2.7E-02
7440-62-2	Vanadium and Compounds	2.81	2.81	2.81					2.8E-02	4.7E-03		3.3E-02
1330-20-7	Xylenes	30.3	30.3	30.3					7.6E-03	4.0E-03	1.5E-01	1.6E-01
7440-66-6	Zinc and Compounds	45.4	45.4	45.4					7.5E-03	2.0E-05		7.6E-03

Cumulative:

6.7E-04

2.8E+02

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-3

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	11.6	11.6	11.6					9.2E-05	1.2E-06		9.3E-05
7664-41-7	Ammonia	280000	280000	280000								
7440-38-2	Arsenic, Inorganic	2.25	2.25	2.25	8.6E-06	1.4E-07		8.7E-06	5.3E-02	8.5E-04		5.4E-02
7440-39-3	Barium	103	103	103					3.7E-03	8.3E-04		4.5E-03
71-43-2	Benzene	13.2	13.2	13.2	1.8E-06	7.9E-07	4.2E-06	6.8E-06	2.3E-02	1.0E-02	5.0E-02	8.4E-02
7440-43-9	Cadmium (Water)	0.265	0.265	0.265					1.9E-02	6.0E-03		2.5E-02
108-90-7	Chlorobenzene	9.6	9.6	9.6					3.4E-03	3.5E-03	2.2E-02	2.9E-02
16065-83-1b	Chromium(III) (Soluble Compounds)	7.36	7.36	7.36								
7440-48-4	Cobalt	6.14	6.14	6.14					1.5E-01	9.2E-04		1.5E-01
7440-50-8	Copper	3.96	3.96	3.96					7.0E-04	1.1E-05		7.1E-04
98-82-8	Cumene	1.64	1.64	1.64					1.2E-04	3.9E-04	4.7E-04	9.8E-04
106-46-7	Dichlorobenzene, 1,4-	4.65	4.65	4.65	6.4E-08	1.3E-07	2.1E-06	2.3E-06	4.7E-04	9.6E-04	6.6E-04	2.1E-03
156-59-2	Dichloroethylene, cis-1,2-	0.95	0.95	0.95					3.4E-03	1.2E-03	2.7E-03	7.3E-03
123-91-1	Dioxane, 1,4-	34.2	34.2	34.2	8.7E-06	8.8E-08	7.0E-06	1.6E-05	8.1E-03	8.2E-05	1.3E-01	1.4E-01
100-41-4	Ethylbenzene	6.51	6.51	6.51	1.8E-07	3.1E-07	6.6E-07	1.2E-06	9.3E-04	1.6E-03	7.4E-04	3.2E-03
142-82-5	Heptane, N-	0.86	0.86	0.86					2.0E-02			2.5E-04
7439-92-1	~Lead and Compounds	12.3	12.3	12.3					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	43.2	43.2	43.2					1.3E-02	5.1E-03		1.8E-02
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	2.16	2.16	2.16							8.2E-05	8.2E-05
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.281	0.281	0.281	1.3E-09	8.3E-11	3.0E-09	4.3E-09			1.1E-05	1.1E-05
7440-02-0	Nickel Soluble Salts	18.6	18.6	18.6					6.6E-03	5.2E-04		7.1E-03
14797-55-8	Nitrate (measured as nitrogen)	133	133	133					5.9E-04	9.4E-06		6.0E-04
84-74-2	~Dibutyl Phthalate	8.54	8.54	8.54					6.1E-04	2.4E-03		3.0E-03
84-66-2	~Diethyl Phthalate	30.5	30.5	30.5					2.7E-04	7.1E-05		3.4E-04
91-20-3	~Naphthalene	59.8	59.8	59.8	1.8E-05	3.4E-05	8.3E-05	1.3E-04	2.1E-02	3.9E-02	2.3E+00	2.3E+00
103-65-1	Propyl benzene	1.44	1.44	1.44					1.0E-04	3.6E-04	1.6E-04	6.3E-04
108-88-3	Toluene	5.99	5.99	5.99					5.3E-04	5.2E-04	1.4E-04	1.2E-03
95-63-6	Trimethylbenzene, 1,2,4-	3.51	3.51	3.51					2.5E-03	8.1E-03	6.7E-03	1.7E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.6	1.6	1.6					1.1E-03	2.7E-03	3.0E-03	6.8E-03
7440-62-2	Vanadium and Compounds	2.81	2.81	2.81					4.0E-03	2.4E-03		6.4E-03
1330-20-7	Xylenes	30.3	30.3	30.3					1.1E-03	1.9E-03	3.5E-02	3.8E-02
7440-66-6	Zinc and Compounds	45.4	45.4	45.4					1.1E-03	1.0E-05		1.1E-03

Cumulative:

1.7E-04

6.7E+01

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-4
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-4

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator. Only Method 8260D - VOCs were sampled from this location

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
325		67-64-1	Acetone			ug/L	MW-4									
3.93		71-43-2	Benzene			ug/L	MW-4									
1.72		104-51-8	Butylbenzene, n-			ug/L	MW-4									
2.15		108-90-7	Chlorobenzene			ug/L	MW-4									
1.88	Isopropylbenzene	98-82-8	Cumene			ug/L	MW-4									
0.522	J	95-50-1	Dichlorobenzene, 1,2-			ug/L	MW-4									
16.7		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-4									
371		141-78-6	Ethyl Acetate			ug/L	MW-4									
31.3		100-41-4	Ethylbenzene			ug/L	MW-4									
624		78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/L	MW-4									
179		108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)			ug/L	MW-4									
5.76		91-20-3	-Naphthalene			ug/L	MW-4									
1.94		103-65-1	Propyl benzene			ug/L	MW-4									
28.2		108-88-3	Toluene			ug/L	MW-4									
0.611	J	79-01-6	Trichloroethylene			ug/L	MW-4									
23.4		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-4									
5.66		108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-4									
77.8		1330-20-7	Xylenes			ug/L	MW-4									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-4

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.1E-04	5.1E+00	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	2.9E-05	1.2E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-4

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	325	325	325					1.8E-02	7.4E-05		1.8E-02
71-43-2	Benzene	3.93	3.93	3.93	2.8E-06	4.0E-07	5.5E-06	8.6E-06	4.9E-02	6.5E-03	6.3E-02	1.2E-01
104-51-8	Butylbenzene, n-	1.72	1.72	1.72					1.7E-03			1.7E-03
108-90-7	Chlorobenzene	2.15	2.15	2.15					5.4E-03	1.7E-03	2.1E-02	2.8E-02
98-82-8	Cumene	1.88	1.88	1.88					9.4E-04	9.8E-04	2.3E-03	4.2E-03
95-50-1	Dichlorobenzene, 1,2-	0.522	0.522	0.522					2.9E-04	1.8E-04	1.3E-03	1.7E-03
106-46-7	Dichlorobenzene, 1,4-	16.7	16.7	16.7	1.2E-06	7.9E-07	3.3E-05	3.5E-05	1.2E-02	7.5E-03	1.0E-02	2.9E-02
141-78-6	Ethyl Acetate	371	371	371					2.6E-02	3.8E-04	2.5E+00	2.6E+00
100-41-4	Ethylbenzene	31.3	31.3	31.3	4.4E-06	2.5E-06	1.4E-05	2.1E-05	3.1E-02	1.6E-02	1.5E-02	6.3E-02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	624	624	624					5.2E-02	4.3E-04	6.0E-02	1.1E-01
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	179	179	179							2.9E-02	2.9E-02
91-20-3	-Naphthalene	5.76	5.76	5.76	8.9E-06	5.5E-06	3.5E-05	4.9E-05	1.4E-02	8.2E-03	9.2E-01	9.4E-01
103-65-1	Propyl benzene	1.94	1.94	1.94					9.7E-04	1.1E-03	9.3E-04	3.0E-03
108-88-3	Toluene	28.2	28.2	28.2					1.8E-02	5.3E-03	2.7E-03	2.6E-02
79-01-6	Trichloroethylene	0.611	0.611	0.611	5.2E-07	8.2E-08	6.4E-07	1.2E-06	6.1E-02	8.9E-03	1.5E-01	2.2E-01
95-63-6	Trimethylbenzene, 1,2,4-	23.4	23.4	23.4					1.2E-01	1.2E-01	1.9E-01	4.2E-01
108-67-8	Trimethylbenzene, 1,3,5-	5.66	5.66	5.66					2.8E-02	2.0E-02	4.5E-02	9.4E-02
1330-20-7	Xylenes	77.8	77.8	77.8					1.9E-02	1.0E-02	3.7E-01	4.0E-01

Cumulative:

1.1E-04

5.1E+00

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-4

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	325	325	325					2.6E-03	3.5E-05		2.6E-03
71-43-2	Benzene	3.93	3.93	3.93	5.5E-07	2.3E-07	1.2E-06	2.0E-06	7.0E-03	3.0E-03	1.5E-02	2.5E-02
104-51-8	Butylbenzene, n-	1.72	1.72	1.72					2.4E-04			2.4E-04
108-90-7	Chlorobenzene	2.15	2.15	2.15					7.6E-04	7.7E-04	4.9E-03	6.4E-03
98-82-8	Cumene	1.88	1.88	1.88					1.3E-04	4.5E-04	5.4E-04	1.1E-03
95-50-1	Dichlorobenzene, 1,2-	0.522	0.522	0.522					4.1E-05	8.2E-05	3.0E-04	4.2E-04
106-46-7	Dichlorobenzene, 1,4-	16.7	16.7	16.7	2.3E-07	4.6E-07	7.5E-06	8.2E-06	1.7E-03	3.4E-03	2.4E-03	7.5E-03
141-78-6	Ethyl Acetate	371	371	371					3.8E-03	1.8E-04	6.1E-01	6.1E-01
100-41-4	Ethylbenzene	31.3	31.3	31.3	8.7E-07	1.5E-06	3.2E-06	5.5E-06	4.4E-03	7.6E-03	3.6E-03	1.6E-02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	624	624	624					7.4E-03	2.0E-04	1.4E-02	2.2E-02
108-10-1	Methyl Isobutyl Ketone (4-methyl-2-pentanone)	179	179	179							6.8E-03	6.8E-03
91-20-3	n-Naphthalene	5.76	5.76	5.76	1.8E-06	3.2E-06	8.0E-06	1.3E-05	2.0E-03	3.8E-03	2.2E-01	2.3E-01
103-65-1	Propyl benzene	1.94	1.94	1.94					1.4E-04	4.9E-04	2.2E-04	8.5E-04
108-88-3	Toluene	28.2	28.2	28.2					2.5E-03	2.5E-03	6.4E-04	5.6E-03
79-01-6	Trichloroethylene	0.611	0.611	0.611	7.1E-08	3.4E-08	1.02E-07	2.1E-07	8.7E-03	4.1E-03	3.5E-02	4.8E-02
95-63-6	Trimethylbenzene, 1,2,4-	23.4	23.4	23.4					1.7E-02	5.4E-02	4.5E-02	1.1E-01
108-67-8	Trimethylbenzene, 1,3,5-	5.66	5.66	5.66					4.0E-03	9.4E-03	1.1E-02	2.4E-02
1330-20-7	Xylenes	77.8	77.8	77.8					2.8E-03	4.8E-03	8.9E-02	9.6E-02

Cumulative:

2.9E-05

1.2E+00

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-5
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-5

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2880	F1	7664-41-7	Ammonia			ug/L	MW-5									
4.88	J	7440-38-2	Arsenic, Inorganic			ug/L	MW-5									
145		7440-39-3	Barium			ug/L	MW-5									
5.59		71-43-2	Benzene			ug/L	MW-5									
10.1		108-90-7	Chlorobenzene			ug/L	MW-5									
11.7		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-5									
219		7439-96-5	Manganese (Non-diet)			ug/L	MW-5									
0.338		7439-97-6	~Mercury (elemental)			ug/L	MW-5									
0.227	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	MW-5									
74.6	J	14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-5									
1.83		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-5									
0.784	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-5									
7.98	J	1330-20-7	Xylenes			ug/L	MW-5									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-5

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.3E-04	5.1E+00	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	2.8E-05	1.1E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-5

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.
 ** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	2880	2880	2880								
7440-38-2	Arsenic, Inorganic	4.88	4.88	4.88	9.4E-05	5.0E-07		9.4E-05	8.1E-01	3.6E-03		8.1E-01
7440-39-3	Barium	145	145	145					3.6E-02	2.3E-03		3.8E-02
71-43-2	Benzene	5.59	5.59	5.59	3.9E-06	5.7E-07	7.8E-06	1.2E-05	7.0E-02	9.2E-03	8.9E-02	1.7E-01
108-90-7	Chlorobenzene	10.1	10.1	10.1					2.5E-02	7.9E-03	9.7E-02	1.3E-01
106-46-7	Dichlorobenzene, 1,4-	11.7	11.7	11.7	8.1E-07	5.5E-07	2.3E-05	2.4E-05	8.3E-03	5.2E-03	7.0E-03	2.1E-02
7439-96-5	Manganese (Non-diet)	219	219	219					4.6E-01	5.0E-02		5.1E-01
7439-97-6	-Mercury (elemental)	0.338	0.338	0.338								5.4E-01
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.227	0.227	0.227	5.2E-09	1.1E-10	1.1E-08	1.6E-08			3.6E-05	3.6E-05
14797-55-8	Nitrate (measured as nitrogen)	74.6	74.6	74.6					2.3E-03	1.0E-05		2.3E-03
95-63-6	Trimethylbenzene, 1,2,4-	1.83	1.83	1.83					9.1E-03	9.1E-03	1.5E-02	3.3E-02
108-67-8	Trimethylbenzene, 1,3,5-	0.784	0.784	0.784					3.9E-03	2.8E-03	6.3E-03	1.3E-02
1330-20-7	Xylenes	7.98	7.98	7.98					2.0E-03	1.1E-03	3.8E-02	4.1E-02

Cumulative:

1.3E-04

5.1E+00

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-5

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	2880	2880	2880								
7440-38-2	Arsenic, Inorganic	4.88	4.88	4.88	1.9E-05	2.9E-07		1.9E-05	1.2E-01	1.8E-03	6.6E-01	6.6E-01
7440-39-3	Barium	145	145	145					5.2E-03	1.2E-03		1.2E-01
71-43-2	Benzene	5.59	5.59	5.59	7.8E-07	3.3E-07	1.8E-06	2.9E-06	9.9E-03	4.3E-03	2.1E-02	3.5E-02
108-90-7	Chlorobenzene	10.1	10.1	10.1					3.6E-03	3.6E-03	2.3E-02	3.0E-02
106-46-7	Dichlorobenzene, 1,4-	11.7	11.7	11.7	1.6E-07	3.3E-07	5.2E-06	5.7E-06	1.2E-03	2.4E-03	1.7E-03	5.3E-03
7439-96-5	Manganese (Non-diet)	219	219	219					6.5E-02	2.6E-02		9.1E-02
7439-97-6	-Mercury (elemental)	0.338	0.338	0.338							1.3E-01	1.3E-01
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.227	0.227	0.227	1.0E-09	6.7E-11	2.4E-09	3.5E-09			8.6E-06	8.6E-06
14797-55-8	Nitrate (measured as nitrogen)	74.6	74.6	74.6					3.3E-04	5.3E-06		3.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	1.83	1.83	1.83					1.3E-03	4.2E-03	3.5E-03	9.0E-03
108-67-8	Trimethylbenzene, 1,3,5-	0.784	0.784	0.784					5.6E-04	1.3E-03	1.5E-03	3.4E-03
1330-20-7	Xylenes	7.98	7.98	7.98					2.8E-04	4.9E-04	9.1E-03	9.9E-03

Cumulative:

2.8E-05

1.1E+00

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-6
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-6

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
11.5	J*	67-64-1	Acetone			ug/L	MW-6									
25400		7664-41-7	Ammonia			ug/L	MW-6									
8.53	J	7440-38-2	Arsenic, Inorganic			ug/L	MW-6									
352	^3+	7440-39-3	Barium			ug/L	MW-6									
5.28		71-43-2	Benzene			ug/L	MW-6									
3.43		7440-41-7	Beryllium and compounds			ug/L	MW-6									
1.63	J	7440-43-9	Cadmium (Water)			ug/L	MW-6									
3.24	J	105-60-2	Caprolactam			ug/L	MW-6									
12.3		108-90-7	Chlorobenzene			ug/L	MW-6									
168	^3+	16065-83-1b	Chromium(III) (Soluble Compounds)			ug/L	MW-6									
7.2	J	7440-48-4	Cobalt			ug/L	MW-6									
71.7	^3+	7440-50-8	Copper			ug/L	MW-6									
0.767	J Isopropylbenzene	98-82-8	Cumene			ug/L	MW-6									
4.08		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-6									
1.64		156-59-2	Dichloroethylene, cis-1,2-			ug/L	MW-6									
0.515	J	156-60-5	Dichloroethylene, trans-1,2-			ug/L	MW-6									
1.27		123-91-1	Dioxane, 1,4-			ug/L	MW-6									
25.1		100-41-4	Ethylbenzene			ug/L	MW-6									
75.3		7439-92-1	~Lead and Compounds			ug/L	MW-6									
396		7439-96-5	Manganese (Non-diet)			ug/L	MW-6									
1.03		7439-97-6	~Mercury (elemental)			ug/L	MW-6									
4.31	J*	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/L	MW-6									
83.7	^3+	7440-02-0	Nickel Soluble Salts			ug/L	MW-6									
91.5		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-6									
6.09	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-6									
14.6		7782-49-2	Selenium			ug/L	MW-6									
1.01	J^3+	7440-22-4	Silver			ug/L	MW-6									
2.21		108-88-3	Toluene			ug/L	MW-6									
2.65		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-6									
0.826	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-6									
261		7440-62-2	Vanadium and Compounds			ug/L	MW-6									
47.1		1330-20-7	Xylenes			ug/L	MW-6									
1650		7440-66-6	Zinc and Compounds			ug/L	MW-6									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-6

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	2.1E-04	3.5E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	4.3E-05	7.8E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-6

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	11.5	11.5	11.5					6.4E-04	2.6E-06		6.4E-04
7664-41-7	Ammonia	25400	25400	25400							2.4E+01	2.4E+01
7440-38-2	Arsenic, Inorganic	8.53	8.53	8.53	1.6E-04	8.8E-07		1.7E-04	1.4E+00	6.2E-03		1.4E+00
7440-39-3	Barium	352	352	352					8.8E-02	5.5E-03		9.3E-02
71-43-2	Benzene	5.28	5.28	5.28	3.7E-06	5.4E-07	7.3E-06	1.2E-05	6.6E-02	8.7E-03	8.4E-02	1.6E-01
7440-41-7	Beryllium and compounds	3.43	3.43	3.43					8.6E-02	5.4E-02		1.4E-01
7440-43-9	Cadmium (Water)	1.63	1.63	1.63					8.1E-01	7.2E-02		8.8E-01
105-60-2	Caprolactam	3.24	3.24	3.24					3.2E-04	3.6E-06		3.3E-04
108-90-7	Chlorobenzene	12.3	12.3	12.3					3.1E-02	9.6E-03	1.2E-01	1.6E-01
16065-83-1b	Chromium(III) (Soluble Compounds)	168	168	168								
7440-48-4	Cobalt	7.2	7.2	7.2					1.2E+00	2.1E-03		1.2E+00
7440-50-8	Copper	71.7	71.7	71.7					8.9E-02	3.9E-04		9.0E-02
98-82-8	Cumene	0.767	0.767	0.767					3.8E-04	4.0E-04	9.2E-04	1.7E-03
106-46-7	Dichlorobenzene, 1,4-	4.08	4.08	4.08	2.8E-07	1.9E-07	8.0E-06	8.5E-06	2.9E-03	1.8E-03	2.4E-03	7.2E-03
156-59-2	Dichloroethylene, cis-1,2-	1.64	1.64	1.64					4.1E-02	4.5E-03	2.0E-02	6.5E-02
156-60-5	Dichloroethylene, trans-1,2-	0.515	0.515	0.515					1.3E-03	1.4E-04	6.2E-03	7.6E-03
123-91-1	Dioxane, 1,4-	1.27	1.27	1.27	1.6E-06	5.6E-09	1.1E-06	2.8E-06	2.1E-03	6.6E-06	2.0E-02	2.2E-02
100-41-4	Ethylbenzene	25.1	25.1	25.1	3.5E-06	2.0E-06	1.1E-05	1.7E-05	2.5E-02	1.3E-02	1.2E-02	5.0E-02
7439-92-1	~Lead and Compounds	75.3	75.3	75.3					>SL**	>SL**	>SL**	
7439-96-5	Manganese (Non-diet)	396	396	396					8.2E-01	9.1E-02		9.1E-01
7439-97-6	~Mercury (elemental)	1.03	1.03	1.03							1.6E+00	1.6E+00
78-93-3	Methyl Ethyl Ketone (2-Butanone)	4.31	4.31	4.31					3.6E-04	2.9E-06	4.1E-04	7.7E-04
7440-02-0	Nickel Soluble Salts	83.7	83.7	83.7					2.1E-01	4.6E-03		2.1E-01
14797-55-8	Nitrate (measured as nitrogen)	91.5	91.5	91.5					2.9E-03	1.3E-05		2.9E-03
86-30-6	Nitrosodiphenylamine, N-	6.09	6.09	6.09	3.8E-07	1.2E-07		5.0E-07				
7782-49-2	Selenium	14.6	14.6	14.6					1.5E-01	6.4E-04		1.5E-01
7440-22-4	Silver	1.01	1.01	1.01					1.0E-02	6.7E-04		1.1E-02
108-88-3	Toluene	2.21	2.21	2.21					1.4E-03	4.2E-04	2.1E-04	2.0E-03
95-63-6	Trimethylbenzene, 1,2,4-	2.65	2.65	2.65					1.3E-02	1.3E-02	2.1E-02	4.8E-02
108-67-8	Trimethylbenzene, 1,3,5-	0.826	0.826	0.826					4.1E-03	3.0E-03	6.6E-03	1.4E-02
7440-62-2	Vanadium and Compounds	261	261	261					2.6E+00	4.4E-01		3.0E+00
1330-20-7	Xylenes	47.1	47.1	47.1					1.2E-02	6.3E-03	2.3E-01	2.4E-01
7440-66-6	Zinc and Compounds	1650	1650	1650					2.7E-01	7.3E-04		2.7E-01

Cumulative:

2.1E-04

3.5E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-6

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	11.5	11.5	11.5					9.1E-05	1.2E-06		9.2E-05
7664-41-7	Ammonia	25400	25400	25400								
7440-38-2	Arsenic, Inorganic	8.53	8.53	8.53	3.2E-05	5.2E-07		3.3E-05	2.0E-01	3.2E-03	5.8E+00	5.8E+00
7440-39-3	Barium	352	352	352					1.3E-02	2.8E-03		1.5E-02
71-43-2	Benzene	5.28	5.28	5.28	7.4E-07	3.2E-07	1.7E-06	2.7E-06	9.4E-03	4.0E-03	2.0E-02	3.3E-02
7440-41-7	Beryllium and compounds	3.43	3.43	3.43					1.2E-02	2.8E-02		4.0E-02
7440-43-9	Cadmium (Water)	1.63	1.63	1.63					1.2E-01	3.7E-02		1.5E-01
105-60-2	Caprolactam	3.24	3.24	3.24					4.6E-05	1.7E-06		4.8E-05
108-90-7	Chlorobenzene	12.3	12.3	12.3					4.4E-03	4.4E-03	2.8E-02	3.7E-02
16065-83-1b	Chromium(III) (Soluble Compounds)	168	168	168								
7440-48-4	Cobalt	7.2	7.2	7.2					1.7E-01	1.1E-03		1.7E-01
7440-50-8	Copper	71.7	71.7	71.7					1.3E-02	2.0E-04		1.3E-02
98-82-8	Cumene	0.767	0.767	0.767					5.5E-05	1.8E-04	2.2E-04	4.6E-04
106-46-7	Dichlorobenzene, 1,4-	4.08	4.08	4.08	5.6E-08	1.1E-07	1.8E-06	2.0E-06	4.1E-04	8.4E-04	5.8E-04	1.8E-03
156-59-2	Dichloroethylene, cis-1,2-	1.64	1.64	1.64					5.8E-03	2.1E-03	4.7E-03	1.3E-02
156-60-5	Dichloroethylene, trans-1,2-	0.515	0.515	0.515					1.8E-04	6.5E-05	1.5E-03	1.7E-03
123-91-1	Dioxane, 1,4-	1.27	1.27	1.27	3.2E-07	3.3E-09	2.6E-07	5.8E-07	3.0E-04	3.1E-06	4.8E-03	5.1E-03
100-41-4	Ethylbenzene	25.1	25.1	25.1	7.0E-07	1.2E-06	2.6E-06	4.4E-06	3.6E-03	6.1E-03	2.9E-03	1.2E-02
7439-92-1	-Lead and Compounds	75.3	75.3	75.3					>SL**	>SL**	>SL**	
7439-96-5	Manganese (Non-diet)	396	396	396					1.2E-01	4.7E-02		1.6E-01
7439-97-6	-Mercury (elemental)	1.03	1.03	1.03							3.9E-01	3.9E-01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	4.31	4.31	4.31					5.1E-05	1.4E-06	9.8E-05	1.5E-04
7440-02-0	Nickel Soluble Salts	83.7	83.7	83.7					3.0E-02	2.4E-03		3.2E-02
14797-55-8	Nitrate (measured as nitrogen)	91.5	91.5	91.5					4.1E-04	6.4E-06		4.1E-04
86-30-6	Nitrosodiphenylamine, N-	6.09	6.09	6.09	7.6E-08	6.8E-08		1.4E-07				
7782-49-2	Selenium	14.6	14.6	14.6					2.1E-02	3.3E-04		2.1E-02
7440-22-4	Silver	1.01	1.01	1.01					1.4E-03	3.4E-04		1.8E-03
108-88-3	Toluene	2.21	2.21	2.21					2.0E-04	1.9E-04	5.0E-05	4.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	2.65	2.65	2.65					1.9E-03	6.1E-03	5.0E-03	1.3E-02
108-67-8	Trimethylbenzene, 1,3,5-	0.826	0.826	0.826					5.9E-04	1.4E-03	1.6E-03	3.5E-03
7440-62-2	Vanadium and Compounds	261	261	261					3.7E-01	2.2E-01		5.9E-01
1330-20-7	Xylenes	47.1	47.1	47.1					1.7E-03	2.9E-03	5.4E-02	5.8E-02
7440-66-6	Zinc and Compounds	1650	1650	1650					3.9E-02	3.7E-04		3.9E-02

Cumulative:

4.3E-05

7.8E+00

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-7
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-7

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
30200		7664-41-7	Ammonia			ug/L	MW-7									
191		7440-39-3	Barium			ug/L	MW-7									
3.57		71-43-2	Benzene			ug/L	MW-7									
8.55		108-90-7	Chlorobenzene			ug/L	MW-7									
1.34	J	7440-48-4	Cobalt			ug/L	MW-7									
8.03		7440-50-8	Copper			ug/L	MW-7									
2.03	Isopropylbenzene	98-82-8	Cumene			ug/L	MW-7									
2.06		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-7									
0.247	J	156-59-2	Dichloroethylene, cis-1,2-			ug/L	MW-7									
0.697	J	100-41-4	Ethylbenzene			ug/L	MW-7									
4.43		7439-92-1	~Lead and Compounds			ug/L	MW-7									
1300		7439-96-5	Manganese (Non-diet)			ug/L	MW-7									
5.32		7440-02-0	Nickel Soluble Salts			ug/L	MW-7									
144		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-7									
20.7		91-20-3	~Naphthalene			ug/L	MW-7									
1.85		103-65-1	Propyl benzene			ug/L	MW-7									
58.6		7440-66-6	Zinc and Compounds			ug/L	MW-7									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-7

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.9E-04	3.6E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	5.0E-05	8.3E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-7

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.
 ** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	30200	30200	30200							2.9E+01	2.9E+01
7440-39-3	Barium	191	191	191					4.8E-02	3.0E-03		5.1E-02
71-43-2	Benzene	3.57	3.57	3.57	2.5E-06	3.6E-07	5.0E-06	7.8E-06	4.5E-02	5.9E-03	5.7E-02	1.1E-01
108-90-7	Chlorobenzene	8.55	8.55	8.55					2.1E-02	6.7E-03	8.2E-02	1.1E-01
7440-48-4	Cobalt	1.34	1.34	1.34					2.2E-01	3.9E-04		2.2E-01
7440-50-8	Copper	8.03	8.03	8.03					1.0E-02	4.4E-05		1.0E-02
98-82-8	Cumene	2.03	2.03	2.03					1.0E-03	1.1E-03	2.4E-03	4.5E-03
106-46-7	Dichlorobenzene, 1,4-	2.06	2.06	2.06	1.4E-07	9.8E-08	4.0E-06	4.3E-06	1.5E-03	9.2E-04	1.2E-03	3.6E-03
156-59-2	Dichloroethylene, cis-1,2-	0.247	0.247	0.247					6.2E-03	6.8E-04	3.0E-03	9.8E-03
100-41-4	Ethylbenzene	0.697	0.697	0.697	9.8E-08	5.6E-08	3.1E-07	4.6E-07	7.0E-04	3.7E-04	3.3E-04	1.4E-03
7439-92-1	-Lead and Compounds	4.43	4.43	4.43					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	1300	1300	1300					2.7E+00	3.0E-01		3.0E+00
7440-02-0	Nickel Soluble Salts	5.32	5.32	5.32					1.3E-02	2.9E-04		1.4E-02
14797-55-8	Nitrate (measured as nitrogen)	144	144	144					4.5E-03	2.0E-05		4.5E-03
91-20-3	-Naphthalene	20.7	20.7	20.7	3.2E-05	2.0E-05	1.3E-04	1.8E-04	5.2E-02	3.0E-02	3.3E+00	3.4E+00
103-65-1	Propyl benzene	1.85	1.85	1.85					9.2E-04	1.0E-03	8.9E-04	2.8E-03
7440-66-6	Zinc and Compounds	58.6	58.6	58.6					9.7E-03	2.6E-05		9.8E-03

Cumulative:

1.9E-04

3.6E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-7

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	30200	30200	30200								6.9E+00
7440-39-3	Barium	191	191	191					6.8E-03	1.5E-03		8.3E-03
71-43-2	Benzene	3.57	3.57	3.57	5.0E-07	2.1E-07	1.1E-06	1.8E-06	6.3E-03	2.7E-03	1.4E-02	2.3E-02
108-90-7	Chlorobenzene	8.55	8.55	8.55					3.0E-03	3.1E-03	2.0E-02	2.6E-02
7440-48-4	Cobalt	1.34	1.34	1.34					3.2E-02	2.0E-04		3.2E-02
7440-50-8	Copper	8.03	8.03	8.03					1.4E-03	2.3E-05		1.4E-03
98-82-8	Cumene	2.03	2.03	2.03					1.4E-04	4.9E-04	5.8E-04	1.2E-03
106-46-7	Dichlorobenzene, 1,4-	2.06	2.06	2.06	2.8E-08	5.7E-08	9.2E-07	1.0E-06	2.1E-04	4.2E-04	2.9E-04	9.3E-04
156-59-2	Dichloroethylene, cis-1,2-	0.247	0.247	0.247					8.8E-04	3.1E-04	7.0E-04	1.9E-03
100-41-4	Ethylbenzene	0.697	0.697	0.697	1.9E-08	3.3E-08	7.1E-08	1.2E-07	9.9E-05	1.7E-04	8.0E-05	3.5E-04
7439-92-1	~Lead and Compounds	4.43	4.43	4.43					<SI>**	<SI>**	<SI>**	
7439-96-5	Manganese (Non-diet)	1300	1300	1300					3.8E-01	1.5E-01		5.4E-01
7440-02-0	Nickel Soluble Salts	5.32	5.32	5.32					1.9E-03	1.5E-04		2.0E-03
14797-55-8	Nitrate (measured as nitrogen)	144	144	144					6.4E-04	1.0E-05		6.5E-04
91-20-3	~Naphthalene	20.7	20.7	20.7	6.3E-06	1.2E-05	2.9E-05	4.7E-05	7.4E-03	1.4E-02	7.9E-01	8.1E-01
103-65-1	Propyl benzene	1.85	1.85	1.85					1.3E-04	4.7E-04	2.1E-04	8.1E-04
7440-66-6	Zinc and Compounds	58.6	58.6	58.6					1.4E-03	1.3E-05		1.4E-03

Cumulative:

5.0E-05

8.3E+00

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-8
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-8

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
90900		7664-41-7	Ammonia			ug/L	MW-8									
153		7440-39-3	Barium			ug/L	MW-8									
1.91		71-43-2	Benzene			ug/L	MW-8									
3.81		108-90-7	Chlorobenzene			ug/L	MW-8									
2.15	J	7440-48-4	Cobalt			ug/L	MW-8									
1.38	J	7440-50-8	Copper			ug/L	MW-8									
0.677	J Isopropylbenzene	98-82-8	Cumene			ug/L	MW-8									
1.57		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-8									
13.7		123-91-1	Dioxane, 1,4-			ug/L	MW-8									
540		7439-96-5	Manganese (Non-diet)			ug/L	MW-8									
5.17		7440-02-0	Nickel Soluble Salts			ug/L	MW-8									
563		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-8									
5.1		91-20-3	-Naphthalene			ug/L	MW-8									
1.22	J	7440-62-2	Vanadium and Compounds			ug/L	MW-8									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-8

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	8.1E-05	9.0E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	2.0E-05	2.1E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-8

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.
 ** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	90900	90900	90900							8.7E+01	8.7E+01
7440-39-3	Barium	153	153	153					3.8E-02	2.4E-03		4.1E-02
71-43-2	Benzene	1.91	1.91	1.91	1.3E-06	1.9E-07	2.7E-06	4.2E-06	2.4E-02	3.2E-03	3.1E-02	5.7E-02
108-90-7	Chlorobenzene	3.81	3.81	3.81					9.5E-03	3.0E-03	3.7E-02	4.9E-02
7440-48-4	Cobalt	2.15	2.15	2.15					3.6E-01	6.3E-04		3.6E-01
7440-50-8	Copper	1.38	1.38	1.38					1.7E-03	7.6E-06		1.7E-03
98-82-8	Cumene	0.677	0.677	0.677					3.4E-04	3.5E-04	8.1E-04	1.5E-03
106-46-7	Dichlorobenzene, 1,4-	1.57	1.57	1.57	1.1E-07	7.4E-08	3.1E-06	3.3E-06	1.1E-03	7.0E-04	9.4E-04	2.8E-03
123-91-1	Dioxane, 1,4-	13.7	13.7	13.7	1.8E-05	6.0E-08	1.2E-05	3.0E-05	2.3E-02	7.2E-05	2.2E-01	2.4E-01
7439-96-5	Manganese (Non-diet)	540	540	540					1.1E+00	1.2E-01		1.2E+00
7440-02-0	Nickel Soluble Salts	5.17	5.17	5.17					1.3E-02	2.8E-04		1.3E-02
14797-55-8	Nitrate (measured as nitrogen)	563	563	563					1.8E-02	7.7E-05		1.8E-02
91-20-3	-Naphthalene	5.1	5.1	5.1	7.9E-06	4.9E-06	3.1E-05	4.4E-05	1.3E-02	7.3E-03	8.2E-01	8.4E-01
7440-62-2	Vanadium and Compounds	1.22	1.22	1.22					1.2E-02	2.0E-03		1.4E-02

Cumulative:

8.1E-05

9.0E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-8

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	90900	90900	90900								2.1E+01
7440-39-3	Barium	153	153	153					5.4E-03	1.2E-03		6.7E-03
71-43-2	Benzene	1.91	1.91	1.91	2.7E-07	1.1E-07	6.1E-07	9.9E-07	3.4E-03	1.5E-03	7.3E-03	1.2E-02
108-90-7	Chlorobenzene	3.81	3.81	3.81					1.4E-03	1.4E-03	8.7E-03	1.1E-02
7440-48-4	Cobalt	2.15	2.15	2.15					5.1E-02	3.2E-04		5.1E-02
7440-50-8	Copper	1.38	1.38	1.38					2.5E-04	3.9E-06		2.5E-04
98-82-8	Cumene	0.677	0.677	0.677					4.8E-05	1.6E-04	1.9E-04	4.0E-04
106-46-7	Dichlorobenzene, 1,4-	1.57	1.57	1.57	2.2E-08	4.4E-08	7.0E-07	7.7E-07	1.6E-04	3.2E-04	2.2E-04	7.1E-04
123-91-1	Dioxane, 1,4-	13.7	13.7	13.7	3.5E-06	3.5E-08	2.8E-06	6.3E-06	3.2E-03	3.3E-05	5.2E-02	5.5E-02
7439-96-5	Manganese (Non-diet)	540	540	540					1.6E-01	6.3E-02		2.2E-01
7440-02-0	Nickel Soluble Salts	5.17	5.17	5.17					1.8E-03	1.5E-04		2.0E-03
14797-55-8	Nitrate (measured as nitrogen)	563	563	563					2.5E-03	4.0E-05		2.5E-03
91-20-3	-Naphthalene	5.1	5.1	5.1	1.6E-06	2.9E-06	7.1E-06	1.1E-05	1.8E-03	3.4E-03	1.9E-01	2.0E-01
7440-62-2	Vanadium and Compounds	1.22	1.22	1.22					1.7E-03	1.0E-03		2.8E-03

Cumulative:

2.0E-05

2.1E+01

North Carolina Department of Environmental Quality Risk Calculator

Version Date:	July 2024
Basis:	May 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	GW Assessment MW-9
Submittal Date:	11/5/2024
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-9

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

The highest concentrations of each constituent from the sample location were input into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
51500		7664-41-7	Ammonia			ug/L	MW-9									
6.52		7440-38-2	Arsenic, Inorganic			ug/L	MW-9									
150		7440-39-3	Barium			ug/L	MW-9									
1.75		71-43-2	Benzene			ug/L	MW-9									
2.84	J	105-60-2	Caprolactam			ug/L	MW-9									
4.83		108-90-7	Chlorobenzene			ug/L	MW-9									
0.796	J	7440-48-4	Cobalt			ug/L	MW-9									
0.683	J	106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-9									
13.9		123-91-1	Dioxane, 1,4-			ug/L	MW-9									
1.26		7439-92-1	~Lead and Compounds			ug/L	MW-9									
131		7439-96-5	Manganese (Non-diet)			ug/L	MW-9									
2.31	J	7440-02-0	Nickel Soluble Salts			ug/L	MW-9									
123		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-9									
4.86	J	91-20-3	~Naphthalene			ug/L	MW-9									
6.71		7440-62-2	Vanadium and Compounds			ug/L	MW-9									

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-9

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	2.0E-04	5.2E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	4.4E-05	1.2E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.
2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-9

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.
 ** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	51500	51500	51500								
7440-38-2	Arsenic, Inorganic	6.52	6.52	6.52	1.3E-04	6.7E-07		1.3E-04	1.1E+00	4.8E-03		1.1E+00
7440-39-3	Barium	150	150	150					3.7E-02	2.4E-03		4.0E-02
71-43-2	Benzene	1.75	1.75	1.75	1.2E-06	1.8E-07	2.4E-06	3.8E-06	2.2E-02	2.9E-03	2.8E-02	5.3E-02
105-60-2	Caprolactam	2.84	2.84	2.84					2.8E-04	3.2E-06		2.9E-04
108-90-7	Chlorobenzene	4.83	4.83	4.83					1.2E-02	3.8E-03	4.6E-02	6.2E-02
7440-48-4	Cobalt	0.796	0.796	0.796					1.3E-01	2.3E-04		1.3E-01
106-46-7	Dichlorobenzene, 1,4-	0.683	0.683	0.683	4.7E-08	3.2E-08	1.3E-06	1.4E-06	4.9E-04	3.1E-04	4.1E-04	1.2E-03
123-91-1	Dioxane, 1,4-	13.9	13.9	13.9	1.8E-05	6.1E-08	1.2E-05	3.0E-05	2.3E-02	7.3E-05	2.2E-01	2.5E-01
7439-92-1	-Lead and Compounds	1.26	1.26	1.26					<SL**	<SL**	<SL**	
7439-96-5	Manganese (Non-diet)	131	131	131					2.7E-01	3.0E-02		3.0E-01
7440-02-0	Nickel Soluble Salts	2.31	2.31	2.31					5.8E-03	1.3E-04		5.9E-03
14797-55-8	Nitrate (measured as nitrogen)	123	123	123					3.8E-03	1.7E-05		3.9E-03
91-20-3	-Naphthalene	4.86	4.86	4.86	7.5E-06	4.7E-06	2.9E-05	4.2E-05	1.2E-02	6.9E-03	7.8E-01	8.0E-01
7440-62-2	Vanadium and Compounds	6.71	6.71	6.71					6.6E-02	1.1E-02		7.8E-02

Cumulative:

2.0E-04

5.2E+01

Version Date: July 2024

Basis: May 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: GW Assessment MW-9

* - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.

** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	51500	51500	51500								1.2E+01
7440-38-2	Arsenic, Inorganic	6.52	6.52	6.52	2.5E-05	3.9E-07		2.5E-05	1.5E-01	2.4E-03		1.6E-01
7440-39-3	Barium	150	150	150					5.3E-03	1.2E-03		6.5E-03
71-43-2	Benzene	1.75	1.75	1.75	2.4E-07	1.0E-07	5.6E-07	9.1E-07	3.1E-03	1.3E-03	6.7E-03	1.1E-02
105-60-2	Caprolactam	2.84	2.84	2.84					4.0E-05	1.5E-06		4.2E-05
108-90-7	Chlorobenzene	4.83	4.83	4.83					1.7E-03	1.7E-03	1.1E-02	1.4E-02
7440-48-4	Cobalt	0.796	0.796	0.796					1.9E-02	1.2E-04		1.9E-02
106-46-7	Dichlorobenzene, 1,4-	0.683	0.683	0.683	9.4E-09	1.9E-08	3.1E-07	3.3E-07	6.9E-05	1.4E-04	9.7E-05	3.1E-04
123-91-1	Dioxane, 1,4-	13.9	13.9	13.9	3.5E-06	3.6E-08	2.8E-06	6.4E-06	3.3E-03	3.4E-05	5.3E-02	5.6E-02
7439-92-1	~Lead and Compounds	1.26	1.26	1.26					<SI>**	<SI>**	<SI>**	
7439-96-5	Manganese (Non-diet)	131	131	131					3.9E-02	1.5E-02		5.4E-02
7440-02-0	Nickel Soluble Salts	2.31	2.31	2.31					8.2E-04	6.5E-05		8.9E-04
14797-55-8	Nitrate (measured as nitrogen)	123	123	123					5.5E-04	8.7E-06		5.5E-04
91-20-3	~Naphthalene	4.86	4.86	4.86	1.5E-06	2.7E-06	6.7E-06	1.1E-05	1.7E-03	3.2E-03	1.8E-01	1.9E-01
7440-62-2	Vanadium and Compounds	6.71	6.71	6.71					9.5E-03	5.8E-03		1.5E-02

Cumulative:

4.4E-05

1.2E+01